DOCUMENT RESUME

ED 235 621 EC 160 473

AUTHOR	Swann, Will
TITLE	Special Needs in Education (E241): Psychology and Special Education, Unit 12.
INSTITUTION	Open Univ., Walton, Bletchley, Bucks (England).
REPORT NO	ISBN-0-335-13129-8
PUB DATE	82
NOTE	47p.; For other course components, see EC 160 461-477.
AVAILABLE FROM	Open University Educational Enterprises, Ltd., 12 Cofferidge Close, Stony Stratford, Milton Keynes, MK11 1BY England (no price quoted).
PUB TYPE	Guides - Classroom Use - Materials (For Learner) (051)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Behavior Modification; *Child Development; Course Content; *Disabilities; Educational Philosophy; Educational Psychology; Elementary Secondary Education; Foreign Countries; *Psychology; *Special Education
IDENTIFIERS	United Kingdom

ABSTRACT

One of a series of booklets designed for use in an Open University Course on the education of handicapped students in Great Britain, the booklet examines the application of psychology to special education. Origins of educational psychology are traced, as are the beginnings of psychology's relationship with special education. The author asserts that psychology has been influenced by political factors within local districts as well as by predominating theories such as psychoanalysis. Applications of two major branches of psychology (behavior modification and child development) are considered, with emphasis on the problems of applying these ideas to teaching. Examples of both principles at work are given, and the influences of each upon special education practice are noted. The importance of teaching skills in the natural setting is stressed. Activities and readings are suggested throughout. (CL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED235621

E241 12

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

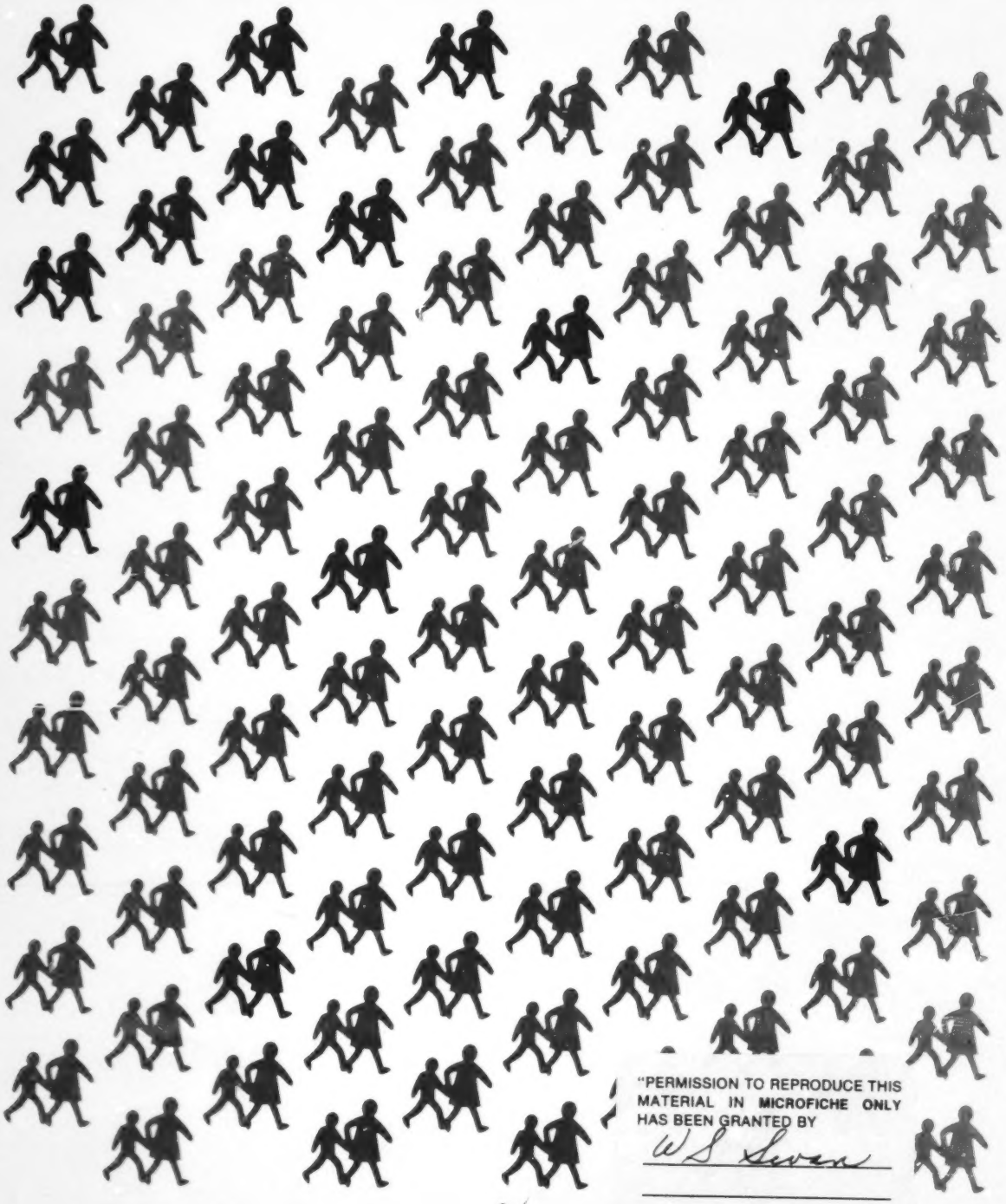
☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

The Open University
Educational Studies: A Second Level Course
Special Needs in Education

PSYCHOLOGY AND SPECIAL EDUCATION



"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

W S Swan

TO THE EDUCATIONAL RESOURCES

EC160473

The Open University
Educational Studies: A Second Level Course
E241 Special Needs in Education

Unit 12
Psychology and special education

Prepared by Will Swann for the Course Team

The Open University Press

The E241 Course Team

Julie Barnfather (secretary)
Carolyn Baxter (course co-ordinator)
Tony Booth (author)
Nick Brenton (BBC producer)
Dennis Briggs (author)
Jim Burge (BBC producer)
Ronnie Flynn (research assistant)
Chris Gravell (editor)
Euan Henderson (IET)
Audrey Lambart (staff tutor)
Rob Lyon (designer)
Kathy Morris (liaison librarian)
John Pettit (editor)
Keith Pocklington (author)
Patricia Potts (author)
Chris Pym (reading member)
Sue Sheldon (course manager)
June Statham (case studies author and editor)
Andrew Sutton (author)
Will Swann (author)
David Thomas (author)
Richard Tomlinson (author)

External assessors

Seamus Hegarty
Philip Williams

The Open University Press, Walton Hall, Milton Keynes MK7 6AA
First published 1982.
Copyright © 1982 The Open University
All rights reserved. No part of this work may be reproduced in any form, by mimeograph or any other means, without permission in writing from the publisher.
Designed by the Graphic Design Group of the Open University.
Printed in Great Britain by
Albert Gait Ltd., Grimsby, England
ISBN 0 335 13129 8
1.1

Contents

	Note on reading	4
1	**Introduction**	5
2	**The deployment of psychology**	6
	Educational psychologists	6
	Psychology in the service of selection	10
	Sorting out the unintelligent from the intelligent	11
	Predicting response to special education	13
	Oiling the wheels of selection	13
	Psychology in the service of treatment	14
	Summary	16
3	**Behaviour modification**	17
	Introduction	17
	The practice of behaviour modification	18
	Chelfham Mill school	18
	Beech Tree House	21
	Behaviour has meaning	23
	Dealing with problem behaviour	24
	The role of behaviour modification	28
	Educational psychologists	28
	The school system	29
	Summary	30
4	**Child development**	30
	Introduction	30
	Development as a curriculum	30
	Language development	31
	Cognitive development	33
	Structured teaching and the idea of overcoming mental handicap	34
	Summary	36
5	**Conclusion**	37
	Educating and understanding children	37
	Teaching in context	38
Appendix 1	**Items from the Stanford-Binet Intelligence Scale**	40
Appendix 2	**An educational psychologist's report**	41
	References	42
	Acknowledgements	44

Note on reading

Set reading

The set reading for this unit is to be found in:

SWANN, W. (ed.) (1981) *The Practice of Special Education*, Oxford, Basil Blackwell/The Open University Press (the Reader). It is:

SINHA, C. 'The role of psychological research in special education' (Reading 6.1).

The case studies for this unit are to be found in:

BOOTH, T. and STATHAM, J. (1982) *The Nature of Special Education*, London, Croom Helm/The Open University Press. They are:

'Off duty: educational psychologists discuss their job' (Case study 26).

'Tokens and tantrums: a behaviour modification programme' (Case study 38).

'Minds of their own: one teacher's philosophy' (Case study 27).

Further reading

If you wish to read more on the subjects I discuss in this unit, I recommend:

BLOCK, N. and DWORKIN, G. (eds) (1977) *The IQ Controversy: critical readings*, London, Quartet Books.

ERWIN, E. (1978) *Behaviour Therapy: scientific, philosophical and moral foundations*, Oxford, Oxford University Press.

GILLHAM, B. (ed.) (1978) *Reconstructing Educational Psychology*, London, Croom Helm.

JEFFREE, D. and McCONKEY, R. (1978) *Let Me Speak*, London, Souvenir Press.

KIERNAN, C., JORDAN, R. and SAUNDERS, C. (1978) *Starting Off*, London, Souvenir Press.

SKINNER, B. F. (1974) *About Behaviourism*, London, Jonathan Cape.

WHELDALL, K. (ed.) (1981) *The Behaviourist in the Classroom: aspects of applied behavioural analysis in British educational contexts*, Birmingham, *Educational Review*.

1 Introduction

1.1 Psychologists like to think of themselves as a species of scientific philanthropists. They hand out their knowledge and skills for the benefit and betterment of the tradesmen-educators. At the same time they maintain a dignity of bearing and a reasonable distance from the shopfloor: they are better paid, more highly qualified, seldom work fixed hours, and cleave to their own professional integrity and independence. At the apex of their own internal pyramid of prestige are the researchers, devotedly rooting out the truth about children, which they pass down to the practitioners, the educational psychologists. These merchants in knowledge understand the character of the tradesmen, and know best how to sell and despatch the goods: a parcel of child development research, a package of behaviourist technique, always of course bearing the label of origin and guarantee of quality—the reference.

1.2 Perhaps the mercantile metaphor is a little overdrawn, but a caricature would be unrecognizable if it didn't bear some similarity to the original. Ten or so years ago, most psychologists doing research on handicapped children did actually think that they could just hand down their discoveries to teachers to use. Now they tend to have a less simple view and it is more common to hear that dissemination of research involves working with teachers in workshops and in the classroom, or even doing research with them. But the belief that psychology is the discipline from which innovations and improvements in special education may be expected is as strong as ever it was.

1.3 For many special educators, the way to understand handicapped children and their education is through the terms and ideas of psychology. This is not surprising as it has become very pervasive and influential. In England there are three professors of special education, Professors Gulliford, Mittler and Wedell, all of whom are psychologists. Books and courses on special education are overwhelmingly psychological. Some 900 educational psychologists exercise considerable power within local education authorities. Curriculum developments look to psychology for their ideas. Psychologists influence what research is funded by the DES, and, by and large, do it. Cyril Burt firmly established the psychologist's power-base and projected his subject into a place in the developing special education system, where it has remained quite secure since (see Units 8 and 9). This unit is a critical analysis of the role psychology has played in special education: I hope to prompt you to think about whether psychology deserves to be as secure as it is. I will not be concerned with the subject of psychology itself, nor will my criticisms be aimed directly as 'pure' psychology. My interest is in the use of psychology in special education.

1.4 Few psychologists would disagree that knowing what is or might be the case is not sufficient grounds for choosing a path of action. But often in special education, a path of action's moral basis is concealed behind a scientific explanation. Is it possible, for example, to solve the problem of a disruptive child on a purely scientific basis? I shall argue that psychology may give the impression that it is, but in fact, it is not.

1.5 I have called section 2, 'The deployment of psychology'. My aim there is to show how psychology has been used in the recent past in special education, and to show that its use has been far removed from the neutral application of a science. In fact, the nature of the education system played a role in shaping the psychology applied to it. I shall give a brief account of the psychologists most closely involved in special education, the educational psychologists, to augment what you read in Units 7 and 8. Then I shall consider briefly the deployment of the two major contributions of psychology to special education before the 1970s: IQ testing and psychoanalysis.

1.6 In sections 3 and 4, I shall look more extensively at two further candidates for application to special education: behaviour modification and child development. I have chosen these two examples because they are by far the most prominent and widespread branches of psychology currently in use in special education. My aim here is not to describe their current state, or to survey the current range of their uses. Rather, I aim at illustrating the problems of applying these ideas to teaching. Section 5 concludes the unit.

2 *The deployment of psychology*

Reading Now read the first seven pages of 'The role of psychological research in special education' by Chris Sinha (Reading 6.1), (pp. 400–406, to the end of the first paragraph on p. 406). In the first part of his article, Chris Sinha examines the relationship between research and practice. He concludes that it is more complicated than just using psychological research to produce better education. (Note the misprint on p. 403, in the fourth paragraph 'underlying changes' should read 'underlying charges'.)

Comment (a) In his first section, Chris Sinha appears to claim that psychology has been an independent force in shaping our ideas on education, especially early education: 'the advent of psychology effected a profound transformation of this view of childhood'. This may grant psychology more independence than it merits, for whatever claims it may make to being a science, it is also the product of our society. Many of our most cherished psychological theories about childhood do not stand up outside our own culture. A belief in the importance of early maternal stimulation and contact looks weak when it is known that mothers in some rural communities in Guatemala virtually ignore their babies most of the time and leave them in dark corners (Kagan, 1973). These babies grow up into lively young children. A belief in the unpreparedness of children of seven, eight and nine for a productive role in society is belied by the productive economic role many such children play in non-Western cultures. Beatrice Whiting (1974) shows that the late twentieth century growth in psychological advice for parents on child-rearing has occurred as the old folk wisdom of parents and in-laws has faded because of social mobility and the break-up of established communities. Psychological theories of childhood and child-rearing seldom describe natural processes. They reflect the culture in which they emerge.

(b) In his second section, Sinha says that psychologists' ideas reflect their views of how to solve or alleviate problems as much as they are the result of pure research. Unit 9 showed that IQ testing is the product of an educational problem: how to segregate slow-learners with a measure of apparent fairness and accuracy. The ideas that are used also mirror what is possible for the psychologist. Few educational psychologists have the power or knowledge to change a whole institution—a school or an LEA—even if they may think that this is needed. Since they are trained and paid to assess and change individual children, this is what they usually do.

(c) Sinha identifies three constraints on applied psychologists (p. 405). First, their practices must 'work' for someone; second, they must 'conform to the norms of legitimate practice'; third, they must enhance or maintain the practitioners' professional standing. These present all manner of dilemmas for educational psychologists and they are very important in shaping their work. I shall now look at how these constraints work.

Educational psychologists

2.1 You read descriptions of what some educational psychologists do in Unit 7, and learnt something of their battles with medical officers for control over 'ascertainment' in Unit 8. There are now something like 900 educational psychologists in England and Wales, with the full panoply of professionalism: salaries which are substantially in excess of teachers at a comparable point in their career, and their own professional organization, the Association of Educational Psychologists (AEP), with its own journal and annual conference. Being new, they are a relatively young profession: there are twice as many under 40 as there are over 40, and the great majority have less than ten years experience in the job. About two-thirds are trained teachers, although 90 per cent have teaching experience, usually for five years or less.

2.2 These figures come from a survey conducted by the British Psychological Society (BPS, 1980) called, *Psychological Services for Children in England and Wales*. What is the nature of these 'psychological services'? One way to answer this is to look at how educational psychologists spend their time. Figure 1 gives the average times the survey found

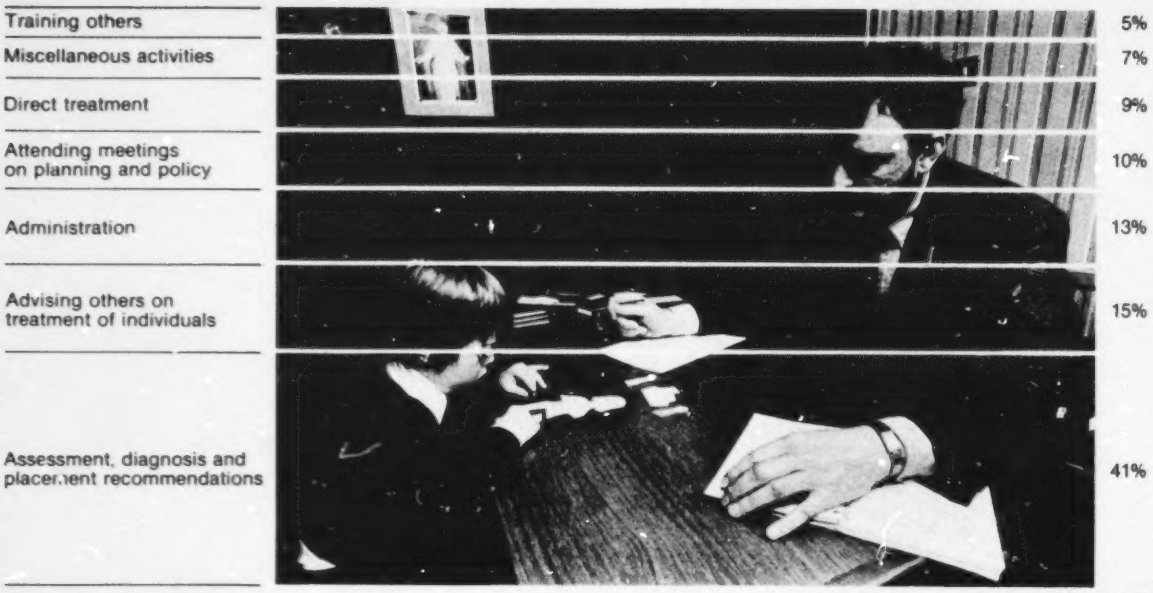


Figure 1 The activities of educational psychologists.

235 psychologists spent on different aspects of their job. By far the largest amount of time is spent in the activities that Sally Tomlinson described in the Reader article for Unit 7: assessing and making recommendations about children referred from ordinary schools. A long way behind, at 15 per cent of their time, comes working with other people on programmes to treat individual children, and if we add the 9 per cent spent on direct treatment, we see that around one quarter of their time is spent on individual treatment. Administration takes up a further 13 per cent, which leaves the remainder for planning, training people, and other minor activities. When psychologists are actually in direct contact with children, they spend most of their time—70 per cent on average—dealing with children who have mild learning difficulties, or troubled and troublesome children.

2.3 This numerical picture of educational psychologists shows that they are *people who deal directly with individual children*, and on the average they spend about twice as much time assessing and diagnosing individual children as treating them. Those children they assess and diagnose are largely children referred from ordinary schools for special education. They therefore play a central role in the administration of the special system: they are the people who in large part control access to special education. We know that many children are referred from ordinary schools because they do not fit an inflexible system, and then pass to special schools where they receive an education no different in many cases from ordinary schools. Are these psychological services, then, for the children, or for the LEA?

2.4 The psychological tool that has been used most often in assessment for special education is the individual intelligence, or IQ, test. Most children who see an educational psychologist are given an IQ test. One study looked at how psychologists in Portsmouth dealt with nearly 700 children referred to them in 1973. Of these, nearly 500 were seen within one year of referral. Of these children, 71 per cent were given an intelligence test. Younger children were even more likely to receive one: 81 per cent of under-fives compared to only 45 per cent of over-elevens (Wright and Payne, 1979). John Quicke (1980) asked nearly 300 educational psychologists which tests they used regularly in their work, and found that the most popular was the Wechsler Intelligence Scale for Children—WISC(R), which was used regularly by 82 per cent of these psychologists. The other principle IQ test at that time, the Stanford-Binet, was used regularly by 42 per cent. Since then, a new individual intelligence test, the British Ability Scales, has been introduced, which may end up the most popular.

2.5 Just as many psychologists have grown disenchanted with their role as gatekeeper to special schools, so, too, many have become highly critical of the use of IQ tests in particular

and psychometric tests in general. Andrew Sutton (1981) tells of one educational psychologist who was sacked by Berkshire in 1977 for 'gross misconduct' which amounted to refusing to conduct and record the results of IQ tests. The case subsequently went before an industrial tribunal, whose judgement sheds light on the educational psychologist's contractual position and moral dilemma as an employee of an LEA:

> Throughout the hearing, the applicant's case was founded on the concept that he was in some way an independent professional consultant who had children referred to him as 'clients'. Even accepting that it was common parlance for children dealt with by educational psychologists to be referred to as 'clients', the tribunal could not accept that the applicant was in any way acting other than as an employee to whom instructions could properly be given on the policy to be followed in the treatment of cases for which the respondent Council was responsible . . .
>
> . . . the fundamental point remained that, whereas in some local education authorities, the need for and value of intelligence tests might be virtually disregarded, in others an entirely different view is taken . . . The tribunal was unable to accept the applicant's contention that, because he held different views about the assessment and testing of children, he was at liberty to ignore instructions given on behalf of the respondent Council on its requirements for the treatment of cases for which it, as an education authority, bore responsibility.
>
> (Decision of the industrial tribunal, 1978, paras 17–18, quoted in Sutton, 1981)

Reading Now read Case study 26, 'Off-duty: educational psychologists discuss their job'. You have already read this as part of Unit 7. This case study demonstrates the variation in the jobs that educational psychologists do, and the views they hold on their role. Concentrate on what these psychologists have to say about:

(a) IQ tests and assessment;

(b) the functions psychologists perform;

(c) their training.

Comment (a) IQ tests are routine for some people, but disavowed by others. Jack is their staunchest supporter, rationalizing their use as a structured interview within which to observe children. Roy admits he uses them 'because I didn't know what else to do'.

(b) The criticisms they advanced are:

(i) IQ tests only have meaning when applied to group differences. I shall expand on this point in the next section.

(ii) One interview away from the classroom doing unfamiliar tasks is no way to find out about a child's problems or their solution.

(iii) There is no need to have an artificial situation in which to understand a child. We already have everyday ways of understanding people.

(c) Psychologists may specialize in dealing with limited groups of children. Jack deals almost exclusively with deaf children.

(d) Although some of these psychologists act as agents for special schools, Eva in particular is trying to work to keep children out of special schools. This puts her into potential conflict with other parts of the system.

(e) The discussion is dominated by the psychologist's job of working with individuals, but there are hints that solving these problems may entail changes in the individual's environment: classroom, school, home.

(f) Training is not and cannot be a complete preparation for practice, particularly since quality seems to vary so much.

(g) Psychologists are not prepared for a great deal of their work by their training. Eva comments that most of her time is spent in secondary schools but she learnt nothing of them on her course.

(h) Her course appeared to be primarily concerned with the study of individual defects and deficiencies, rather than with the study of educational settings.

2.6 So practitioner psychologists are not free agents or scientific advisers to teachers or LEAs. Let's look again at the three constraints Sinha identified:

(a) *Psychologists' practices must 'work' for someone.* Something that 'works' is something with an outcome that is approved of. In education, a practice that 'works' for one group may be undesirable for another. Using IQ tests to place children in special schools is an approved practice for an LEA, special schools and ordinary schools. It is less often approved by parents and children. Psychologists, because of their position as employees of LEAs, are much more likely to use techniques that work for their employers, than ones that work for their supposed clients.

(b) *Psychologists' practices must conform to the 'norms of legitimate practice'.* Some norms of medical practice are governed by medical knowledge: doctors break the rules if they administer the wrong drug or diagnose the wrong disease. Few, if any, norms of psychological practice are derived from psychological knowledge in this way. What is permissible for the psychologist in special education is what the people she works with deem acceptable, or what she can persuade them to accept. Not giving IQ tests was taken as breaking the rules in Berkshire. Norms of practice are also shaped by the psychologist's power and status. She may be convinced that the only way to solve a school's problem of disruptive children is to sack the head. But this is not in her power. A number of psychologists argue that they should aim at changing schools rather than individual children (this is known as 'the systems approach' in the jargon; see Burden, 1981). Very few are in a position to bring it off. Other people, like head-teachers, have much more power to do this.

(c) *Practices must enhance or maintain the practitioners' professional standing.* There are fair and unfair ways of doing this. An unfair way is to surround your actions with the language of esoteric professional technique while what you actually do is quite ordinary. I shall argue in section 3 that some behaviour-modifier psychologists do this. The only legitimate way to enhance professional standing is to develop and deploy skills and knowledge that other people need but don't have. Without doing this, it is still possible to enhance your standing by ensuring you have some of the trappings of a professional: extra training, autonomy, a consultant role, no fixed hours, high salary, direct access to powerful people. Practices which conflict with these trappings may be resisted. Recently an LEA wanted to appoint a psychologist to a secondary school with direct accountability to the head. This was fiercely resisted by the AEP, which circulated its members, warning them off. Perhaps the best way to deploy psychological knowledge is by deploying psychologists in schools. If so, then professionalism can be an impediment to effectiveness.

2.7 Inside these tightly defined boundaries, and faced all the time with the dilemma of who the real client is, psychologists, to maintain their special status, are supposed to use psychological knowledge. A lot of what passes as such knowledge is frankly useless. It seldom provides any valid conclusions that could not have been reached by any reasonable person, and it often supplies generalizations of dubious validity. Take one of the most popular textbooks available, *Psychology and the Teacher*, by Dennis Child. Professor Child opens optimistically:

> Traditionally, educational psychology has endeavoured to apply the findings of general, social and child psychology to assist in a better understanding of learning processes . . . It seeks to discover, by studying the mental, physical, social and emotional behaviour of children and adults, the factors which influence the quality and quantity of learning; ideally it offers to replace 'common sense' or trial and error notions of learning and teaching with a variety of hypotheses regarding learning environments derived from systematic studies of individuals in those environments.
>
> (Child, 1977, pp. 2–3)

At the end of the chapter on 'learning theory and practice', these are some of the practical conclusions that the author reaches: 'Children can be encouraged to learn using intrinsic (affiliation, exploration, manipulation, achievement) and extrinsic (incentives, praise and reproof) rewards. Immediate relevance and importance has high motivational value . . . Knowledge of results too, particularly successful results, has reinforcement value' (Child, 1977, p. 108).

2.8 These are all claims that it would be absurd to deny; they are facts that we all know once we see through the jargon. Other claims made by Child are contentious: 'Habits of

thinking, that is personal and unique ways of tackling problems, are laid down in early life as learning sets'. But habits of thinking are often picked up in adult life, and those that are picked up in early life may be dropped. In Sections 3 and 4 I shall look at two major psychological contenders for usefulness.

Psychology in the service of selection

2.9 The first distinctly psychological practice used in special education was intelligence testing, as you learnt in Unit 9. Mass education, established in the last three decades of the nineteenth century, for the first time brought the full diversity of children's abilities to the attention of the public authorities. In principle, diversity is no great problem if the means to accommodate it are created within the system. But, as Patricia Potts and Gillian Sutherland showed in Unit 9, the arrangements that emerged were far from flexible: payment by results and standard examinations of the three Rs guaranteed a rigid curriculum, as did class sizes of 50 and 60 children. In these circumstances it was inevitable that there would be misfits and some way would have to be found of removing them. Alfred Binet was asked by the Parisian school authorities to find a means to separate reliably children who could benefit from the education offered from those who could not. In 1905 he and Theophile Simon first published the results of their efforts: the first modern tests of intelligence. Since the same problems of selection for special schools and classes were confronting the British authorities, Binet and Simon's methods were received enthusiastically and, in 1913, Cyril Burt was given the job of devising similar tests for the LCC. The events show how far the growth of intelligence testing was from the growth of an independent science. Psychometrics, which was for many years virtually synonymous with educational psychology in this country, grew out of the education system. IQ tests are still used routinely in selection procedures for special education, especially for ESN(M) schools. In this section I shall enquire into whose interests are served by the use of IQ tests and what purposes they serve.

2.10 Why would anyone use a psychological test in the process of selection? Why not just rely on teachers' reports from ordinary schools and special schools' predictions of how a child will fit in? Crudely, because people believe IQ tests are better selection devices.

Alfred Binet (1857–1911), founder of the intelligence testing movement.

L'ANNÉE PSYCHOLOGIQUE

PUBLIÉE PAR

ALFRED BINET

AVEC LA COLLABORATION DE

MM. BEAUNIS, BOHN, BOURDON, DENIKER, DUBI, FÉRÉ, FOUCAULT, FREDERICQ, VAN GEHUCHTEN, GRASSET, HAMELINK, LACASSAGNE, LEUBA, MALAPERT, MARTIN, MEILLET, Mme MIGNT, MM. NUEL, SIMON, VANET

Secrétaire de la Rédaction : LARGUIER DES BANCELS

ONZIÈME ANNÉE

MÉMOIRES ORIGINAUX

La mesure de la fatigue intellectuelle (Binet).
La science du témoignage (Binet).
A propos de la mesure de l'intelligence (Binet).
Associations spontanées (Vaney).
État de la sensibilité tactile dans des cas d'hémiplégie organique (Bourdon et Dubi).
L'asymétrie du sens gustatif (Rosenthal).
L'étude pédagogique de la connaissance et de l'image (Binet).
La mesure du degré d'instruction (Vaney).
Méthodes nouvelles pour faire le diagnostic différentiel des courbures de l'intelligence (Binet et Simon).
La pédagogie des arriérés (Vaney).
Tableau clinique de l'aboulomanie spontanée (Binet).
L'action motrice bilatérale du chaque hémisphère cérébral (Grasset).

REVUES GÉNÉRALES ANNUELLES

Anatomie nerveuse (von Gehuchten).
Physiologie nerveuse (Frederiq).
Physiologie des sensations (Nuel).
Anthropologie (Dunlop).
Pathologie nerveuse (Sicilian).
Psychologie comparée (Bohn).
Criminalité (Lacassagne et Martin).
Philosophie (Weigand).
Linguistique (Meillet).
Psychologie religieuse (Leuba).

ANALYSES

par MM. Beaunis, Binet, Bourdon, Foucault, Larguier

Sensations, Images, Perception, Attention, Associations d'idées, Mémoire, Activité intellectuelle, Processus supérieurs, Émotions, Sens musculaire, Sens moral, Volonté, Mouvements, Pédagogie, Divers, etc., etc.

PARIS

MASSON ET Cie, EDITEURS

LIBRAIRES DE L'ACADÉMIE DE MÉDECINE

120, BOULEVARD SAINT-GERMAIN

1903

Title page of the journal in which Binet and Simon gave their first detailed description of their tests.

We can divide this very vague answer into three, more specific, reasons for using IQ tests:

(a) IQ tests sort out children who are unintelligent from those who are intelligent but failing at school or 'underachieving'. Teachers might confuse these.

(b) IQ tests are a better way of predicting how a child will respond to special education for slow learners.

(c) IQ tests make selection for special education appear more rigorous and scientific, and so more acceptable.

Sorting out the unintelligent from the intelligent

2.11 It is surprising how people are more than willing to accept IQ tests as measures of intelligence without knowing the first thing about what they consist of. But what reasoning permits the psychologist to claim that his test is measuring intelligence? He needs to make certain assumptions. First, he must assume that intelligence is a power that can be measured independently of situations and problems to which it is applied. This assumption makes it possible to say that a child has an IQ of 70, or 90, or whatever, without saying when and where and under what conditions. Second, he must assume that the tasks contained in the IQ test are the best possible tasks to reveal this power. Both assumptions are highly suspect.

2.12 Some human powers are quite independent of their context, like shouting or lifting heavy weights. These powers can be measured against absolute criteria so we can assess the noise level in Db or weight lifted in kg. Measured IQ is quite unlike this. An IQ of 70 or 90 does not mean 70 or 90 units of intelligence, as if there were a known unit and a zero point. An IQ compares a child to a large group of children who have done the IQ test and says where in the ranking of this group that child would fall. When IQ tests are given to a large number of children and their results plotted on a chart, together they produce a particular shape. Figure 2 shows this *frequency distribution* chart which gives the number of children scoring at various levels on the test. You'll see that the mass of children score around the average and relatively few score very high or very low. This shape is known as a *normal distribution*. Test constructors have argued that this is how intelligence is distributed in the population. It is from a distribution like this that the IQ score gains its meaning. An IQ of 100 means 'the average score on the test of a particular group of people'. An IQ of 80 means 'a score on the test lower than the scores of *x* per cent of a particular group and higher than *y* per cent. So IQ is measured relative to the scores of the population at large. This kind of measurement is called norm-referenced measurement.

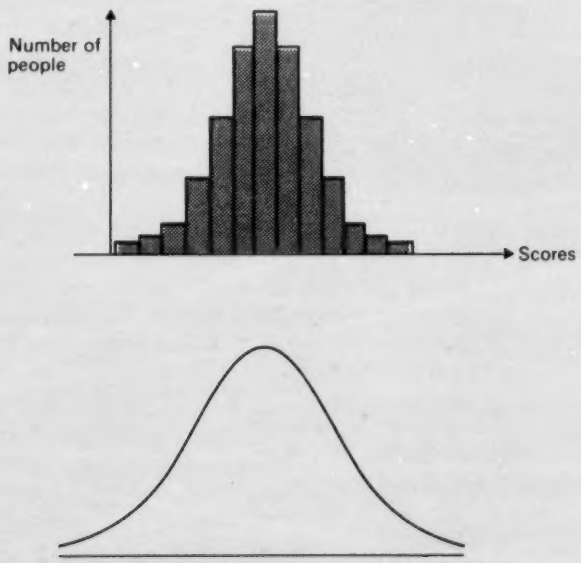


Figure 2 The normal distribution. The typical distribution of scores on an intelligence test, and the mathematical 'normal distribution curve'.

2.13 There is nothing wrong in principle with norm-referenced measurement. We could easily express height or weight in these terms. If the average height of the population is five feet eight inches, we would call that a height quotient (HQ) of 100. Such measurements are used extensively in paediatric practice to check on the physical progress of babies. Children falling dramatically below the norms can then be investigated to see if something is wrong. But with height, noisiness and lifting ability we have absolute standards to measure against. With IQ, there is no standard but that of how other people performed on the same test. So the content of the test is vitally important. Clearly, it would be quite unacceptable to select the items for a test on an arbitrary basis. When we measure an ability we give people tasks that we know will measure that ability, and before we can do that we have to know what the ability entails. What does intelligence entail?

2.14 The most common IQ tests have a long history, and although they have been periodically revised, nothing has been more influential in determining their content today than their original content. To understand how and why they are as they are, we need to look at them historically. What did the founding fathers of intelligence testing say intelligence was? Alfred Binet said:

> There is in intelligence, it seems to us, a fundamental agent the lack or alteration of which has the greatest impact for practical life, and that is judgement, otherwise known as good sense, practical sense, initiative, the faculty of adopting one's self. To judge well, to understand well, to reason well, these are the essential springs of intelligence.
>
> (Binet and Simon, 1905)

2.15 Lewis Terman, the man who transported Binet's test from Paris to California and turned it into the Stanford-Binet in 1916, defined intelligence as: '(1) tendency to take and maintain a definite direction, (2) capacity to make adaptations for the purpose of attaining a desired end, and (3) power of autocriticism' (Terman, 1916). David Wechsler, author of the WISC, and others had reached a similar conclusion at the end of a long career:

> What we measure with tests is not what tests measure—not information, not spatial perception, not reasoning ability. These are only a means to an end. What intelligence tests measure, what we hope they measure, is something much more important: the capacity of an individual to understand the world about him and his resourcefulness to cope with its challenges.
>
> (Wechsler, 1975)

2.16 But all these definitions could give rise to an infinite number of tasks. We might assess intelligence by studying how people cope with their everyday lives, rather than give them unfamiliar puzzles and questions to solve. In fact the actual items used in IQ tests represent a very limited range of tasks indeed. I have included some examples from one IQ test in Appendix 1. What grounds do we have to suppose that these tasks give us the measure of the intelligence that a child will apply to other tasks? Why do we believe these tasks are any better an indication of intelligence than everyday tasks at home and school? To attribute to IQ tests any special significance, we should have to show that they are powerful indicators of intelligence shown in many other abilities, in a way that playing sport, reading and doing maths are not. If we could accurately predict a person's success in school, at work, at leisure, from their IQ, then IQ tests would have some special significance. We cannot. The relationship between the IQs and school achievement scores of groups of children is rather weak: IQ usually accounts for only half or less of the variation of measures of achievement in school. But even if there was quite a close relationship of IQ and achievement scores in a group of children, this relationship only applies to the group as a whole. Any individual within the group could have a high IQ and low achievement, or vice versa. (This is the point made by Tim in Case study 26, p. 167.) In other words, knowing a child's IQ gives very little guidance as to her school achievement. With slow learning and mentally handicapped children the relationship is even weaker. Trying to guess a person's job or their success at performing it from their IQ is an equally hazardous business.

2.17 This gives us little reason to treat an IQ test as a better measure of intelligence than school achievement. It undermines the idea that an IQ test will tell us a child's 'true intelligence' which can be compared to her actual success or failure. (Unless, of course,

we say simply that intelligence is what intelligence tests measure. In this case, a belief that this 'intelligence' is at all important is a matter of blind faith.) IQ tests are just one sort of task that people may perform intelligently or stupidly, and there are very thin grounds indeed for expecting anyone to take an IQ score more seriously than assessments of the intelligence with which a child performs school tasks.

Predicting response to special education

2.18 Industrial and commercial organizations often use psychological tests to select people for training for jobs. They want to be sure that the people they choose will stay the course and succeed. By comparing the original test scores of their successes and failures they can learn which scores are most likely to minimize their failures, and consequently avoid wasted expenditure. People often apply the same reasoning to selection for special education, albeit with less precision. They say that certain IQ levels are appropriate for different sorts of special education. In its pamphlet in 1946, *Special Educational Treatment* (referred to extensively in Unit 8, section 3), the Ministry of Education took this view:

> The children for whom the day special school is most appropriate are found among those whose limited ability corresponds with an intelligence quotient of about 55 to 70 or 75. Those with lower intelligence (55 to 60 or 65 intelligence quotient) might all attend, but amongst those in the group with higher intelligence more and more other factors have to be taken into account before a decision is made to send a child to a special school.
>
> In general only those educationally subnormal children whose retardation is felt to be mainly due to low intelligence should be sent to special schools. There may be a small proportion of children with intelligence quotients of over 70 who should be sent there if the local education authority thinks there are strong indications that this is the right course, but a child with an intelligence quotient over 75 should rarely find his way there . . . and would be better in a class in an ordinary school in which special educational treatment is provided.
>
> (Ministry of Education, 1946)

2.19 The two cases—industry and education—are less similar than they might seem. In industry there are specific jobs to be done—gas fitting, accountancy, and so on—and the training is within certain margins, a fixed quantity. Economy dictates it should be completed quickly and people should be proficient in the job at the end. People are fitted to the training. In special education it is usually argued that the education should fit the pupil, so the very idea of treating education as a fixed quantity for which people should be selected is itself highly questionable, irrespective of the selection device used. If the task is to adapt the education on offer to the child, then selection is no longer meaningful. Selection is only meaningful if we consider it appropriate to offer a number of forms of education whose content is, within certain limits, fixed. An education system which is child-centred requires not selection, but information about the child which will be useful in planning teaching. IQ tests, because the tasks they contain are not part of a curriculum, cannot provide that kind of information. Look again at Jack's comments in Case Study 26, p. 168. What could Jack's 'over-shot the mark on block design' possibly mean for classroom practice? As Roy says later, an IQ test is 'a situation in which you [the psychologist] know what the rules are'; what goes on in it only has meaning within that situation. Expertise is cocooned in a setting quite unlike everyday school and home settings, from which only irrelevant details or unhelpful generalities can emerge.

Oiling the wheels of selection

2.20 The use of IQ tests in selection for special education was originally very different from the way tests are used in selection for industrial training. Andrew Sutton (1982) has recently shown that they were not used to select children who were suitable for an ESN school, but as a standardized way of filling available places. The cut-off point for ESN placement of an IQ of 70 that has become so widely used was not chosen with the belief that children with IQs below 70 needed a different sort of education, it was chosen as a way of controlling the numbers of children selected. The credit for this goes to Cyril Burt.

2.21 When Burt began work for the LCC he was very unhappy about existing selection practices, deploring 'the quicksand of subjective judgement' on which admission depended.

But he also stressed there could be no absolute point on the IQ scale which would sort out children who would go to special schools. The problem was to apply a criterion that would result, as he saw it, in a fair and just selection of children within an authority. Burt's solution was to base the cut-off point on the IQ scale on the available number of special school places: '*for immediate practical purposes the only satisfactory definition of mental deficiency is a percentage definition based on the amount of existing accommodation*' (Burt, 1921; Burt's emphasis). At the time, the LCC had places for about one and a half per cent of each age group who were eligible for special schools, and so the special school child was to be: '*one for who intelligence ranks among the lowest one and a half per cent of the school population of the same age*'. (Burt's emphasis). It turned out that on Burt's own IQ test, the point that cut off one and a half per cent of the population was 69.4. Burt anticipated that in areas where the number of special school places was smaller than one and a half per cent of the total of school places, then the IQ cut-off point would be correspondingly lower. But, in time, the 70 cut-off became 'frozen' in people's minds as a convenient criterion for selection.

2.22 Even then this cut-off point turned out in practice to be relatively unimportant. In 1962, the DES carried out a survey of the IQs of children in ESN schools and found that 45 per cent of children had IQs of 70 or greater (Williams, 1966). In another study, Williams and Gruber (1967) found that IQs in ESN schools ranged from below 60 to above 80. 70 was around the mid-point of scores.

2.23 Since IQ bears no relevance to the curriculum, and it seems not to have mattered much in practice what a child's IQ actually was, it is difficult to escape the conclusion that the effect of IQ testing has been to add a seemingly scientific gloss to the highly subjective and political business of selection. How far this is from the image of the psychologist as a scientific philanthropist! Appendix 2 contains a typical report by an educational psychologist based largely on the results of an IQ test. It also gives the psychologist's views of the child's personality gained from a projective test in which the child was shown ink blots and asked to say what he could see. How far does this report represent valid or relevant psychological expertise?

Psychology in the service of treatment

2.24 IQ testing was never of any help in the business of educating children. Psychologists' earliest involvement in the treatment of handicapped children was the use of psychoanalysis in the treatment of disturbed children. In this section I want to show how the theory has limited people's views of disturbed children, and limited the help on offer. (I shall not examine psychoanalysis itself, but its use in special education.)

2.25 You will recall that Irene Bowman (Reading 2.3 in the Reader) described the emergence of psychoanalytic treatment between the wars. She argued that psychoanalysis became the approach preferred by child guidance clinics although the children they were presented with often appeared not to fit their model of treatment: rather than nervous, unhappy children with parents who were susceptible to intellectual reasoning about their relationship with their child, they were more often delinquent, aggressive children from working class homes with parents who had little or nothing in common with the lifestyle or views of psychotherapists.

2.26 Just how deeply embedded psychoanalytic views of children became can be judged from the Underwood Report of 1955. The thinking of this committee was dominated by the view that maladjustment was an emotional defect which was the result of a breakdown of, or failure to establish, relationships with other people—most particularly the parents. They saw emotional development as a series of stages, each of which bore its own characteristic form of emotional satisfaction:

> The normal course of development seems to be to experience these satisfactions in an unhurried, confident fashion, gaining something from them and either leaving them behind or building them into the next stage. Deprivation, curtailment or perversion of these natural satisfactions may lead to regression or to a general disinclination to go forward.
>
> (Ministry of Education, 1955, p. 15).

2.27 With this model of development firmly established, it was clear where the committee would look for the causes of maladjustment:

> There is much evidence that failure in personal relationships is the most important factor in maladjustment . . . if the infant finds no one to love in his first years, there is a real danger that his capacity for coming to terms with people (or things like his work) will be seriously impaired . . . if a person is deprived of the normal experiences of babyhood, there will inevitably be times later on when the baby in him will take over and direct his behaviour . . . The nature of the relationship with the parents should change with the various stages of the child's development. A right relationship at one period may be harmful if prolonged beyond its proper term: the dependence on the mother which is proper for the infant is harmful to the schoolboy . . . A child's development may be hindered by fussiness expressed in the early years in rigid habit training and later in curbing adventurousness.
>
> (Ministry of Education, 1955, pp. 30–31)

2.28 So when a child came into conflict with his teachers, the problem was to be understood as belonging to him and his family. Yet, as Irene Bowman pointed out, many of the children referred then for child guidance, and today the overwhelming majority, came from working class, often poor backgrounds. If the family on its own was the main cause of maladjustment, how could the committee explain the differences between middle class and working class families? This is how the report tackled the problem:

> Adverse social conditions may be a factor in producing maladjustment . . . Conditions of discomfort and squalor need not have any bad psychological effect on the healthy child, but, whether caused by domestic inefficiency or bad housing, they may constitute such a serious strain on the parents that they fail to give the child the affection and care which he needs. It has to be remembered too that some of the characteristics which make people inadequate in managing households may make them inadequate as parents . . .
>
> Poverty may operate in the same way as bad or overcrowded housing, and it too may have a further effect if it leads to any ostracism of the family by neighbours. Yet many fine men and women have been reared in slum dwellings or in rural homes at bare subsistence level, and there is no reason to suppose that such conditions produce maladjustment if the child has received the right kind of care and affection from his parents.
>
> (Ministry of Education, 1955, p. 31)

2.29 The effect of psychoanalytic thinking, then, was to identify the category of maladjustment with personal emotional problems that had their origins in disturbed family relationships. The solution to the problem which the Underwood Committee recommended, and which came about, was a great expansion of places in which personal relationships could be repaired or established: child guidance clinics and special schools, and preventive services aimed at identifying breakdowns in family relationships in early life and putting them right quickly. The continuity of thinking, and the consequences of the thinking, can be seen in these comments made by the head of a residential school for maladjusted children in an interview with me in 1980:

> I went on a year's full-time course at London University that was run by Dr Oakeshott who was certainly psychoanalytical. I understood then the system and the terminology and this greatly interested me, so when I was appointed to this school I brought it with me . . . I asked the authority if they would allow me to be better qualified and take a personal analysis and so understand myself better as well as the children, and from that I've tried to take what I've learnt and present it to the children . . .
>
> I try to understand the pressures they are under. I am tempted at times when the bridge is formed strongly to regress a child but I'm reluctant to do so because I'm stepping into areas that are beyond my knowledge. So I will try to patch up rather than destroy the walls that have been built by the child, to, as it were, push a line of communication through the wall, through the defence the child is offering . . . We talk quite logically, almost like a marriage guidance counsellor, about the problems that parents are presenting and I try to put as fairly as possible what might be their point of view as to why they are not the preferred child, if there is a preferred child.

2.30 I went on to ask this head if he could successfully apply these methods to all the children in the school:

> I think that we are not in a fortunate position, in that we are the only residential school that is run by a small LEA. There is therefore no chance of selection in depth. My training, my experience is that this school will be a school for maladjusted boys; for emotionally disturbed boys. I realize that the authority have a legal obligation to find places for children who are misfits in their day schools. Because I am in that situation it is sometimes insisted that I accept a child who in my opinion would not benefit from the sort of regime and lack of structure that I have here.
>
> There was a time two years ago when there were more than enough, and, as it were, the delinquent element took over the school. The authority has since learnt wisdom, because these children nearly closed the place down. By expelling something like half a dozen we got the balance back.
>
> You see, what the delinquent sees in this type of school is not liberty but license. He doesn't see the freedom that we give as an opportunity, but as a means to carry on his delinquency; and if we became authoritarian we frighten the very child that we seek to help. So the only way really is to contain them until they go to a place that is built for delinquent children like a community home or a remand home.

2.31 This head classified about half of the children in his school as delinquent, so he thought his approach offered help to only half the children referred to him. Although it would be wrong to argue that psychoanalytic thinking has helped nobody in special education, it is the case that as much as it has widened practitioners' powers to help troubled children, it has also restricted them, because so many of the children coming forward as problems do not or will not fit the ideas on which treatment is based.

2.32 As important as the way psychoanalytic thinking restricts the range of children to whom help is offered, is the way it restricts explanations of children's actions. It acts as a filter, making it much harder to see certain simple facts and alternative explanations. We can illustrate this with an example. Michael Rutter and his colleagues conducted surveys of the incidence of maladjustment (which they called 'psychiatric disorder') in ten year olds on the Isle of Wight and in an Inner London Borough (Rutter *et al.*, 1974). They found that many more children were said to be maladjusted in Inner London than on the Isle of Wight—25 per cent as against 12 per cent. In both areas they found that linked to identified maladjustment were a number of social conditions: family discord, parents suffering from mental illness, parents convicted of criminal offences, poverty and bad living conditions and a number of school problems such as a high turnover of staff. It is these same social factors that distinguish the Isle of Wight from Inner London: they are much more prevalent in the latter, where there are many more people living in poverty, in overcrowded poor rented housing, where schools have many more problems to face, and where physical health is much worse. Although all these things mean stress for a family, there is no place in the psychoanalytic explanations commonly used for these social and economic effects.

Summary

2.33 The deployment of psychology in special education has been very different from a neutral application of scientific discoveries to the benefit of children in need of special education. Psychologists working in education are severely constrained by the political pressures in an LEA as to what they may and may not do. They are not free scientific advisers. IQ testing emerged from the need to find a way of selecting for special education and has continued to play, to say the least, a curious role in that process. It has never been of any help in teaching children. Psychoanalysis has had the effect of limiting views of the causes of disturbing behaviour in children, and has produced educational provision based on the assumption that maladjustment is an individual emotional disorder. How far the political context into which the psychological ideas have fitted has governed their use is difficult to assess, but it has clearly had *some* effect. In the next two sections, I shall look at the use currently made of two major branches of psychology in special education.

3 *Behaviour modification*

Introduction

3.1 Many psychologists believe they now have a practical technology to offer which is relevant to teaching, derived from that version of psychology known as *behaviourism*. The practices that owe their lineage to behaviourism come under a wide range of names—applied behaviour analysis, behaviour modification, precision teaching, teaching with behavioural objectives—and are applied to a wide variety of children, most often children who are maladjusted and those who are severely mentally handicapped. Behavioural approaches are increasingly being used with children with learning difficulties in special and ordinary schools, but, as yet, their use with other groups of children is uncommon in this country.

3.2 You will recall from Unit 10 that behaviourist practices are so much an orthodoxy in special education in the US that they are written into the detailed instructions on how to prepare IEPs. Behaviourist approaches are also quite common in ordinary education in the US, whereas their use here is restricted to special education. They have recently become something of a special education orthodoxy in this country as well.

3.3 For most people, 'behaviour' has a connotation of 'bad behaviour', and also of discipline and orderliness, as in expressions such as 'behave yourself!'. In this section I shall concentrate mainly on the use of behaviourist approaches to deal with 'bad behaviour'. The behaviourist gives 'behaviour' a much wider definition: it is taken to mean anything an individual does or says. So language is a kind of behaviour, as is smiling, walking and reading a book. The thorough-going behaviourist argues that it is possible to describe all these skills only from the outside, as behaviours, without reference to what may be going on in someone's mind. Many psychologists now use behaviourist methods in teaching a very wide group of abilities to mentally handicapped children. These methods are often combined with methods derived from the study of child development, and I shall look at some of them in Section 4.

3.4 In what follows I shall concentrate on how behaviour modification is actually used in special education. Behaviourism is a much wider philosophy and behavioural psychology is a branch of psychology with an enormous literature of its own. When criticisms are made of specific practices it is often said that these practices are faulty applications of the theory, and so the criticisms leave the theory unchallenged. I shall offer two sorts of criticism: first I shall look at actual practices, choosing well known and respected examples; secondly, I shall argue that there is something fundamentally wrong with the theory that human action can be described as nothing but behaviour.

B. F. Skinner, the most significant figure in twentieth century behaviourism. Author of Beyond Freedom and Dignity *(1971),* About Behaviourism *(1974) and many other books on the philosophy and theory of behaviourism.*

3.5 I shall describe two examples. The first is an entire school run on behaviour modification principles, and the second is one child who is on a behaviour modification programme (also in a unit run on behaviour modification principles). Both of them involve an increasingly popular method known as the *token economy*. The principle of the token economy is a familiar one: people earn money which has value to the extent to which it can be exchanged for goods and services. In behaviour modification token economies the same happens: children's desirable behaviour is reinforced by gaining tokens—plastic chips or marks on a record card are common examples—which are later cashed in for something they want. Token economies are used mostly in residential settings, but their use in units and day schools, especially those for maladjusted children, has increased recently.

Chelfham Mill school

3.6 Chelfham Mill is an independent residential school in Devon for maladjusted boys. It opened in 1966 and gradually began to establish a token economy which is now fully operational. The director, Roger Burland, describes the system like this:

> The main conception underlying much of the work with the children is that many behavioural disorders of the most divergent types are essentially learned responses, and that learning theory—particularly the techniques evolved from the work of B. F. Skinner (1953), variously described as behaviour modification, behaviour therapy, or applied behaviour analysis—can provide effective means for permanent behaviour change . . .
>
> Before inappropriate behaviour can be modified, eliminated or replaced, it is vital to ensure that we know all about that particular behaviour. Accurate observation must be undertaken so that analysis of the situation is meaningful. Baseline information is always required and this is usually obtained by the observer/manager, i.e. the teacher or residential therapist. Of course, it is ideal in many ways to have an independent observer, but this is not always possible. It is, however, usually possible for another member of staff to take observations for a short while at the same time as the observer/manager so that the reliability of the observer/manager is checked. Naturally it is not easy to observe and teach a class of disruptive children at the same time, and some traditional observation techniques are impossible, but adaptations can be made in order to obtain accurate results . . .
>
> Observations sometimes have to be taken in difficult situations, for instance on walks or on the beach, and here a clip-board would be incongruous. It is amazing what can be written on the back of one's hand. When the data has been collected on an individual or group of individuals, then analysis can be undertaken to formulate various behaviour goals and the best way to reach them. The progress of a behaviour modification programme should be monitored continually. This on-going process and the final evaluation when we feel a goal has been reached renders it unnecessary to resort to such comments as 'I think he is beginning to settle in class' or 'he appears to be concentrating more on his work'. We can say instead that 'whereas six weeks ago he was only 27 per cent on-task he is now 79 per cent on-task, and verbal provocation has fallen from 40 per cent to 8 per cent . . .
>
> It has been the aim here to increase the frequency of appropriate behaviour by providing rewarding experiences (reinforcement) at the appropriate time and at the appropriate level. One of our main concerns early in our development was to establish a workable reward system and as such a token economy was instituted . . .
>
> The token economy works because it basically controls most rewarding situations in a contingent manner. If a child can obtain sweets, unlimited television viewing, visits to town, etc., he will not be particularly motivated to work for these if they are classed as rewards . . .
>
> Basically, when an appropriate behaviour occurs a unit of recognition—a token—is given immediately. This unit can be a plastic disc, a piece of paper, a star stuck on a card, or even a 'verbal' token which is recorded centrally. The child at certain times can exchange his tokens at the token shop . . .
>
> The token shop should contain as many different rewards as possible, i.e. the reinforcement menu should be wide and varied. At Chelfham there are sweets and cakes (all home-made to reduce costs), small cheap plastic toys,

transfers and higher value items such as dinky cars, models, fishing tackle, etc. Tickets may be purchased for certain privileges such as special late nights, extra TV, cookery sessions, disco admission, private dining, breakfast in bed, and many more. A token value is put on all these and adjusted, like any economy, in terms of supply and demand and the value placed on them by the consumer . . .

One vital question to be answered is, 'How are these tokens to be earned?' On this question depends the success of the token economy in its task of changing behaviour. It is most successful if the children can only earn in their personal difficulty areas. For instance, if it is permitted that tokens can be earned for any appropriate behaviour, children will naturally attempt to earn them in the easiest way possible. Therefore, if a child can earn by picking up litter or lining up outside his classroom before lessons, he will do this rather than control his temper in frustrating situations—it is far easier for him. As a result, tokens can only be earned (apart from exceptional circumstances) in designated areas for each child. Therefore, in our previous example the child would earn the majority of his tokens for controlling his temper in frustrating situations. Other appropriate behaviour can be reinforced by praise, thanks, public recognition, a hand on the shoulder, etc . . .

At this school it is possible to lose tokens and this provides an effective measure for enforcing community rules in a fairly easy way. Token loss is rarely built into a behaviour change programme, but the token loss is reserved for such misdemeanours as wearing boots in the lounge, playing in the car park, using the secretary's office as a short cut, and so on. It is interesting to note that one can regard an infringement of the above and the consequential loss of tokens as a child in fact opting to spend two tokens in taking a short cut. All the set token losses are agreed with the children. The whole community takes part in the discussion, and staff and children come to a decision about what is a fair token loss for each misdemeanour. Visitors to the school often ask how we wean away children from the token economy. This is no problem. Often older children will tell staff that they no longer need tokens. In individual programmes praise is always paired with the giving of tokens so that at the end of the programme the tokens are gradually faded away but the praise stays at a high level and self-reinforcement is encouraged.

Apart from the minor sanction of token loss, other sanctions are occasionally used. It is as necessary to ensure that inappropriate behaviour is not reinforced as it is to ensure the opposite. Therefore, one must be able to control consequential reinforcement after an inappropriate behaviour. The concept of 'time out' is useful for this function, and has been shown to be effective in several studies (e.g. Tyler, 1965). Time out is short for 'time out from a reinforcing situation'. Thus, if a child knocks over some desks in a classroom he will gain attention from all the other children, and probably the teacher as well, which could be very reinforcing and rewarding to him. We would, of course, prefer him to gain their attention in an appropriate way, but in this first instance we must take immediate action, minimize the rewarding effect and remove him from the scene. At this school most classrooms have a time out area, and there is a time out bench as well near the dining room. The area should be in a situation which has minimal reinforcement, e.g. a cloakroom (but don't forget to remove the wet day comics!) or behind a cupboard in the classroom. It can be an advantage to have a chair in the time out area to minimize movement, and to designate the area precisely. One class used a two-foot area outside the classroom door as time out, but to enable the teacher to know that the child remained there a board was placed in the square which, on pressure of body weight, lighted up a bulb in the classroom. This 'presence indicator' proved most useful. It is impossible to cut out all reinforcement for inappropriate behaviour, but the reinforcement can be minimal.

It is not easy to put a disturbed child on time out. Some children will openly defy the teacher and will need to be carried to the area and firmly placed there. Some will then stay, and others will run away. One cannot get round the fact that the teacher must have some 'natural' control to use this method. On the other hand, it is possible to reward a child by praise when he has performed even the slightest approximation to time out, e.g. 'Well Johnny, you did sit on the time out bench for a short time and that was good', or 'Jimmy, it was good to see that you were not so noisy on time out today' . . . *Over-correction* is sometimes applied to certain situations: this is a technique originated by N. H. Azrin and R. M. Foxx. For example, a child who has just knocked over some chairs in the dining room, dropped cutlery on the floor and spilled water

would be immediately required to mop all the floor (not just the area where the water was spilled), replace all chairs, re-align the tables, re-lay all the tables (not just the disturbed ones), and check that all was clean and tidy. These measures might have to be repeated if unsatisfactory. This procedure is time-consuming, requires good manager control of the child, an emotional neutrality, and patience. The over-correction should be continued until the child has *obviously had enough*—he can *enjoy* mopping a floor for quite a while! If the above actions occurred during a meal it would obviously be inappropriate to use the technique immediately as the child would be reinforced by making capital out of the situation in front of his peers. In this case he can be put on time out, which would possibly last longer than the time normally advised, until it was convenient for the over-correction to take place.

Very often children themselves are *very unhappy* about their own behaviour, but are suffering from an old learned response to which they are shackled. These children react well to a suggestion of practical help and can become well motivated if allowed to participate in the formulation of the programme, and choose their own reinforcer. The more practical the help is, the more motivated the child becomes. If he is just asked to try harder 'to be good', how can he succeed? Ernie was concerned about the temper tantrums he was having in class. His teacher had obtained a measure of the frequency and duration, and had made notes about possible triggers. This baseline information gave clues to a possible programme of change. Ernie was consulted and said he would like to work each evening on the school farm as his reward, and would like a chart over his work area in class to show his progress. Because of the intensity of the temper tantrums it was decided that a stage programme would be necessary.

Stage 1. If Ernie felt that he was going to lose his temper in class, he would put up his hand and call out his teacher's name. Immediately his teacher would go across to him and Ernie would put his head on the desk and they would talk quietly about an alternative behaviour, e.g. if the trigger had been a boy calling him a name he could ignore it, call him back a name, inform his teacher, or tell the boy he didn't mind how many names he was called. Then Ernie would put into practice the behaviour decided upon. If he could do this he earned a point towards evening farming.

Stage 2 was put into practice after sufficient rehearsal at Stage 1 level and required Ernie immediately he felt the cue for a temper tantrum to put his head on his desk and put his hand up without calling out (which was quite disruptive in Stage 1) when he had selected the behaviour. His teacher would go over immediately to reinforce his choice, and the alternative behaviour would be put into operation. The same reinforcer was used as in Stage 1.

Stage 3 required Ernie to put into operation the alternative behaviour straight away, and inform his teacher afterwards of the complete circumstances.

Stage 4 was a generalization stage to situations such as the playground, dining room, etc.

At all times if in difficulty, Ernie could regress to one of the previous stages. This was an extremely successful programme. The preceding example was not formulated as a written contract, but this can often be extremely helpful.

> I, Freddie, agree to be helpful with others in my housegroup (e.g. helping to make beds, sharing my comics and toys, being nice to other boys, being a good example by following instructions) and will not disturb other boys by teasing them, taking their belongings, calling them names, or getting in their way. I will be able to earn two points in the morning and two points in the afternoon if I am helpful, but if I do any unhelpful things I agree that I should be put on time out. When I reach a total of 36 points earned, whether I have spent them or not, I can be allowed 70 pence worth of fishing tackle from the Rod Room, Barnstaple. If this contract does not work in some way I agree to it being changed.
>
> Signed_____Freddie
>
> _____Susan
>
> Date_____ _____Roger

The above contract was worked out after a lot of discussion and most of the ideas came from Freddie himself. A chart was made on which the score could be kept, and Freddie hung it over his bed. The important elements in this contract are that it is specific in its requirements, giving examples of what to do and what not to do, and discussion of these requirements in further detail so that understanding is assured. Also, provision is made for temporary failure on the programme, or complete failure. One of the main advantages of contract formulation, with heavy

emphasis on the child's personal involvement, is that if it does not work out it is a technical problem rather than a personal one, and it is 'back to the drawing board' to effect a more efficient contract. No party need feel let down, or that they are letting someone else down. The relations can, in fact, be strengthened . . .

As well as individual programmes there are group and class programmes for management and sometimes whole community programmes. 'Charlie' is a little wooden figure who at the time of writing has been ascending and descending a ladder for some four years. When he reaches the top of the ladder the whole community receives a reward. This has been for class academic performance, housegroup routines, settling at bedtimes, litter problems and cleanliness of toilets at different times. It has been difficult to evaluate his effect, but certainly the fact that he has stayed in place and never once been interfered with is indicative of his motivational capacities. Group programmes with titles such as 'Living together' have been instituted to help children get along together in what is rather an artificial situation, and also programmes affecting one individual and the group are often needed. Daniel obtained most of his rewarding experiences from disturbing other boys or getting them to laugh at his antics. To control this his peers were rewarded for ignoring Daniel's inappropriate behaviour. They were successful at doing this, but realizing that Daniel could reduce their earning by being well-behaved, and that this situation could actually encourage Daniel's peers to incite him, it was arranged that the group also earned if Daniel behaved well. The system effectively controlled the inappropriate behaviour and Daniel's reinforcer.

(Burland, 1975)

Activity 1 (a) How far does Roger Burland succeed in describing his programme in purely behavioural terms, without referring to thoughts, feelings or other mental events?

(b) Which of the specific techniques Roger Burland describes are you familiar with from your own experience of classrooms?

Comment (a) I found a number of points where, to explain what was going on, Roger Burland resorts to non-behavioural terms to explain what is happening. Notice phrases like 'children will naturally attempt to earn [tokens] in the easiest way possible'; the infringement of rules as 'a child opting to spend two tokens in taking a short cut'; 'the teacher must have some "natural" control'; children are unhappy because they are 'suffering from an old learned response to which they are shackled'. These and other phrases show that even a thorough-going behaviourist finds it difficult to talk of everything in behavioural terms. Roger Burland uses words describing mental events—desires, choices, unhappiness. These may be just metaphors for events that we could if we wished describe in behavioural terms—perhaps a desire *is* just a tendency to do certain things. But there may be more to this problem. I shall examine this shortly.

(b) The idea that children should be rewarded for doing good things is extremely familiar. I have personal experience of time out—I remember being sent out of the classroom for misbehaving; of over-correction—when I had to clean up *all* the mess I'd made and *more*; of contracts—'if you stop moaning for two days, I shall buy you the chess set you wanted'; and of group rewards—when my class at primary school had to work for a story on Friday afternoon. The fact that these disciplinary tactics were not part of a documented behaviour modification programme made no difference to my perception of them, nor, I suspect, to their effectiveness. If so many techniques predate behaviourist theory and jargon, is it needed at all?

Beech Tree House

3.7 Beech Tree House is a small residential unit. It is set in the grounds of a larger school which caters for severely mentally handicapped children with cerebral palsy. Although a number of the children in Beech Tree House are multiply handicapped, their main problem is deviant behaviour. Malcolm Jones, the head of the unit, describes the problems they face:

> Every child who has entered Beech Tree House could have been educated at a local authority or voluntary organized special school had it not been for pronounced behaviour problems. These include deliberate vomiting, urinating and defecating; eye gouging; biting; kicking and hitting other children and adults;

> self-destructive behaviours which have included the removal of all hair, eyebrows and eyelashes; head banging; destructive attacks ranging from the smashing of lights to the eating of carpets; systematic ripping of their own and other's clothes, total withdrawal and hyperactivity. Because of behaviours such as these many of our children have been excluded from other schools although it has sometimes been the child's family which has felt the need for the son or daughter to receive special training.
>
> (Jones, 1979, p. 28)

3.8 Beech Tree House comprises two modern four-bedroomed houses that have been converted and combined to provide places for nine children. Children may only stay for two years, in which time the unit staff believe they can either change behaviour or fail with that particular child. The majority of programmes used in the unit are run on behaviour modification principles and there are some programmes that apply to all children, such as sitting correctly, not masturbating in public, and, where necessary, toilet-training. In addition to these, each child has purpose-built programmes to cope with their particular problems. The following case study describes one of these.

Reading Now read Case study 38, 'Tokens and tantrums: a behaviour modification programme'. As you read, consider these questions:

(a) Are there any alternative approaches to Emma's problems that you could suggest?

(b) Can you identify drawbacks or disadvantages with this kind of programme?

(c) Compare Emma's behaviour problem with some of the problems described by Roger Burland, particularly Ernie and Freddie. In what ways are they similar and in what ways different?

Comment (a) There are other strategies one might have adopted with Emma, some not involving tokens, but I can't see any alternative to a highly structured programme of some kind which identified precisely the nature of the problem and sought to eliminate it directly. Like many other children at Beech Tree House, Emma is severely mentally handicapped, so an approach which involved reasoning with her, or trying to get her agreement might be very difficult.

(b) The disadvantage of the programme is that it seems very difficult to wean her off the token-economy system, and when it breaks down Emma reverts to her original habits. So if the problem behaviours have been learnt they are very strongly established. On the other hand, the programme has achieved a great deal already, so perhaps this criticism is carping.

(c) Behaviour modification programmes are often devised to eliminate or change 'deviant' behaviour (what counts as deviant I'll consider later). Both Emma and Ernie and Freddie certainly have deviant behaviour patterns but there are some crucial differences. Ernie and Freddie know what they're up to, they can reflect on and explain their behaviour—if only to say that they don't understand it. They can also have a thoughtful discussion with the staff at Chelfham Mill as to what to do about it. Emma's programme does not involve any such verbal negotiation.

Behavioural technology at work. Emma, described in Case study 38, using a token-operated sweet dispenser and cassette recorder.

3.9 The hallmark of these two examples is that children's behaviour is treated as just that: behaviour. This contrasts dramatically with psychoanalysis which sees behaviour as indicating deep-seated mental conflicts which are the focus of intervention. Indeed, many advocates of behavioural methods contrast the practicality of their way of doing things with the vagueness and mystification of psychoanalysis:

> One of the most important contributions of the behaviour therapists was their insistence on getting the problem as clear as possible in their own minds and in those of their clients (see, for instance, Wolpe, 1973). They taught us to reject such vague terms as 'aggressive', 'withdrawn', 'school phobic', 'dyslexic', 'electively mute', and to get down to finding out exactly what the client did (or could not do) on what occasions and under what circumstances. They and their successors, the behaviour modifiers, defined behaviour in this rigorous way because it helped them judge what techniques to apply, the ideal being a tailor-made programme.
>
> But that is not the only advantage. Freud called dreams the royal road to the unconscious. We might say that behaviour was the royal road to the child's world.
>
> (Roe, 1978, p. 62)

3.10 I want now to look at the principle of describing human action as nothing but behaviour which is caused by its immediate consequences and the person's history. We came across an immediate problem in adopting this principle when considering Roger Burland's work. Our whole way of talking is riddled with 'mentalisms'. We talk about children *wanting* to do some things, *hating* some people, *thinking* they can get their own way. One aim of behaviour modification is to convert these and similar statements into behavioural descriptions drawn from what may be observed objectively and agreed upon. Critics, such as Richard Pring, argue that in many cases it is not possible *in principle* to provide a purely behavioural description:

> What Johnny *does* is not to be observed in quite the same way that one can observe what happens to solids when heated or what happens to chemical elements when mixed. For what Johnny does depends on how Johnny sees what he does—if you like, the concepts through which he understands his own and others' actions, and the intentions which 'inform' his behaviour. How a person is thinking, and what that person is intending, cannot be observed—at least not in the same way that chemical reactions can be observed. Two examples will bring out the difficulty. Frequent thefts within a class might be met by a programme of behaviour modification. The behaviour 'stealing' is to be extinguished, and replaced by behaviours characterized as 'respect for property'. However, it is not at all clear that the behaviour observed can be characterized as stealing or non-stealing unless the pupil has a fairly complex conceptual scheme that includes property and ownership relations, and thus has *internalized* those social rules and conventions in terms of which stealing is defined. If you do not have the relevant concepts, and have not mastered the appropriate social conventions, then it is impossible (logically so) for you to steal.
>
> (Pring, 1981, p. 63)

3.11 Stealing, then, is not just a behaviour, it involves breaking social rules, and if someone doesn't know those complicated rules, he isn't stealing—he doesn't understand, and needs to be taught. If you look back at the description of Chelfham Mill you will find a number of cases where the token economy works not, as Roger Burland claims, 'because it basically controls most rewarding situations in a contingent manner', but because it is a system of social rules that the boys do not usually break. Let me give two examples—you may find others. Boys are fined tokens for breaking community rules, for example by playing in the car park. One could say that this was one way of spending tokens. Burland says elsewhere this doesn't happen a lot, but why not? If someone finds it reinforcing to play in the car park once, why don't they do it frequently? One answer is that such an action breaks the agreed rules that everyone understands and which have been negotiated. The second example concerns time out. You will recall that children who find it difficult to stay in the time-out area have their behaviour shaped and reinforced. But if they are being reinforced for staying in time out, why don't they behave in order to stay there longer, and to go back there in future? We know that

praise can be an effective reinforcer, so why not in this situation? The only plausible explanation I can come up with is that the children understand that time out means they have broken the rules, and that's a bad thing. Avoiding this explanation will require a very complex and probably unhelpful theoretical diversion.

3.12 When we observe behaviour we rarely treat it just as behaviour. We interpret it according to social rules and systems. If we see a behaviour we think is undesirable we can explain it in two ways. Suppose for example, Mary keeps leaving her seat. How we interpret that behaviour will depend upon whether or not we think Mary understands that she ought to be in her seat. If she does not understand that, she must be taught that rule, but if she does, we know she is breaking the rule. The same behaviour may indicate quite different things, and if we want to change the behaviour it is not sufficient to note its occurrence: we must also interpret its meaning. This does not entail looking for deep unconscious motives, which can often take us as far from common sense as a purely behaviourist analysis, it simply means we have to understand what someone was trying to achieve with a particular behaviour. We *have* to concern ourselves with intentions and mental functions to understand what is happening.

3.13 This applies not only to normally intelligent difficult children, but to severely mentally handicapped children as well. For example, John Presland, principal educational psychologist for Wiltshire, has for a long time advocated behavioural methods with these children. He argues that their advantage is precision:

> . . . Thus, 'Is kind to other children' is not a behavioural objective because it does not describe any specific act, say anything about the circumstances in which it is to occur or specify how often or for how long the act must occur. The kind of description one would look for is better indicated by 'When another child asks to play with her toy, hands it over on four occasions out of every five'.
>
> (Presland and Roberts, 1980, p. 29)

3.14 But suppose the other child is a twelve-stone skinhead bearing down on his hapless playmate with a mallet out of his carpentry set? Kindness is not a behaviour, but an act that is only recognizable within a social context. The same behaviour in different settings can indicate dramatically different qualities: in this case, kindness and submission.

Dealing with problem behaviour

3.15 I shall now look at some of the specific measures that behaviourists advocate for dealing with troublesome children, and see whether they could be rationally applied to solve the problems of some actual children. Different authors say slightly different things. I shall take as representative the recommendations for action of D. J. Leach and E. C. Raybould in their book *Learning and Behaviour Difficulties in School* (1977). Two extracts from their summary of the stages of assessing and planning to deal with behaviour problems appear below. You may wish to try applying this procedure (in your head) to a disruptive child you know of. Look in particular for anything the procedure would miss.

> *Summary of strategy* In summary, the overall strategy for assessing problems and planning intervention in the classroom (or school) includes the following procedures:
>
> 1 *Assessing behavioural problems.* For all children who are causing most concern or who are most problematic in class, a quick behavioural assessment of the *extent of their problematic behaviours* and hence their general 'disturbance' may be required. This can be achieved by following these steps:
>
> (a) Define in objective terms each setting a child is discordant with (i.e. in which his problem behaviours are exhibited in similar settings by ten per cent or less of his age-group).
>
> (b) Note the number of different settings the child is discordant with.
>
> (c) Note the number of discordant settings that are within the school's boundary and outside it.
>
> (d) Note the number of different problem behaviours exhibited across all settings.
>
> (e) Note whether or not the child is accepted in his peer-group.
>
> From such considerations a list of children who exhibit the greatest number of

problem behaviours in many settings can be drawn up. This will enable priorities to be made for further consideration. The next step is to assess the *relative 'seriousness' of the particular behaviours* exhibited by individual children in school. This can be achieved by following these steps: taking each child individually,

(a) Write down, under each school setting, the particular problem behaviours observed (these should be described carefully in *overt* terms).

(b) Under each school setting, make a note of the children in close proximity to the child and include a note of the adults present when the behaviour occurred.

(c) Under each school setting, note the most worrying or disturbing behaviours that have been observed.

(d) For *each* school setting, rate *each* behaviour observed according to the criteria of intensity, reasonableness, duration, frequency, generality, comparison with age-group norms and effects on others) . . .

(e) From this rating, put the behaviours into an order of priority so that initial intervention can be aimed at increasing or reducing the most 'serious' ones in turn (remember also to assess one's personal feelings, attitudes and expectations about each child considered) . . .

4 *Planning an intervention programme* Once the specific problem behaviours and performance difficulties have been identified, a planned intervention programme aimed at ameliorating them can be initiated. The intervention should include the following steps:

(a) State a desired long-term goal in observable, measurable, positive terms.

(b) Decide how you are going to measure and record the behaviour and performance.

(c) Make base-line observations (or measures) of the specific behaviour or performance.

(d) Make a record of these observations (or measures) . . .

(e) Make a precise statement of the initial short-term goals that are expected to lead successfully to the long-term goal.

(f) Select suitable, naturally-occurring consequences which will act as rewards and therefore help elicit and maintain the desired outcomes . . .

(g) Arrange a programme of materials or events, which are similar to existing materials and classroom activities, that will elicit the desired behaviour or performance . . .

(h) Assess the effectiveness of the intervention programme by comparing base-line measures with post-intervention measures.

(i) Review the programme from step (d) to step (g) if the long-term goal has not been reached.

(j) State a new long-term goal and repeat the whole process from (a) to (i) if the long-term goal has been reached.

(Leach and Raybould, 1977, pp. 54–57)

Activity 2 Now consider these procedures in relation to two disruptive young people described below, in extracts from a book by Rob Grunsell, *Beyond Control? schools and suspension.* How far do you think the behavioural methods Leach and Raybould advocate could offer the school a solution to the disruption of these two young people they have eventually suspended?

Toni Myers and Carl Maynard. Both suspended, aged 15, from Jessop School—Toni Myers in June 1977, Carl Maynard in November 1977.

'Toni is not just rude; she is deliberately and calculatedly insolent'—deputy-head's letter explaining suspension to school governors.

'Carl is into punk rock, glue-sniffing and marxism. Mr Jones really believes he could be a threat to the safety of people in the school.' Minutes of pre-suspension case conference.

Toni, Carl—both could have been academic success stories; both, for their own different reasons, refused to pay the price of conformity to the school system. For Toni and Carl the backgrounds which formed their attitudes to Jessop could hardly have been more different, but their final reasons for rejecting the school are similar enough to warrant close comparison.

Mr Maynard described his own background as 'very poor'—'We lived near a well-breached middle-class area in Brighton and I know what it's like to feel that some people have got things I haven't.' By 'struggling against adversity and sticking to it,' he made his way up from the bottom to being a senior education welfare officer—a struggle which, he admitted, had left its permanent mark. 'I hated social climbers and social and class snobbery and that's very deeply engrained in our way of life even today.' As a committed Marxist, Mr Maynard believed passionately in the value of education, his own route out of poverty. When he took his family on holiday to the Soviet Union, he used the opportunity to make the point. I said to Carl, 'Look how seriously education is taken here . . . I never cease telling them how important education is.' 'I *never* actively encouraged him to go into school and be disruptive.' The statement was totally believable. Having to witness his son do just that had obviously been the most painful experience. In part he blamed himself. Political discussion had always been a central feature of the Maynard household. 'He had access to certain experiences which an average apolitical working-class child would never have had exposure to . . . I think probably in his own little way, Carl picked up some of the backwash and that didn't help him either to survive in school. I blame myself for that.' Carl, then, entered Jessop carrying two strong—and, so it transpired, conflicting influences: one a belief that education was crucial to his life-chances—'I thought I had to get O Levels and all this otherwise I'd be fucked in life'; the other a view of the present social system as oppressive and corrupt.

'Maybe I grew up faster than what I should have done'—was Toni's only possible criticism of her childhood. Her parents split up when she was nine and Toni was left as the only woman in the family home. From then on she was housewife to her father and elder brother—shopping, cleaning, cooking the evening meals. Mr Myers defended what happened as having been Toni's choice: 'I never forced her to, never asked her to—she just did it.' Coming into her house, six years later, I could see immediately what the results of her 'doing it' had been: the house was, indeed, *hers*—spotlessly clean and well managed—and she was a woman, in every sense but age—mature, attractive, totally self-confident, approaching me simply as another adult. Toni was adamant that the benefits of her enforced early maturity had heavily outweighed the burdens of responsibility. In return for acting as housewife she had been treated with adult respect by her 'menfolk', at the very least as their equal.

In the first eighteen months of her secondary career Toni had to change school twice—a consequence of the breakup of her parents' marriage. By the time she entered Jessop, late in the second year, Toni had already bypassed the normal confusion and diffidence of adolescence. She expected to be recognized and treated as an adult.

During her first year there, she coped without major confrontations. She was bright, articulate, socially confident and popular with the boys no doubt—everything that would have been required for academic and social success. But the more confident she became, the more sensitive she was to how the staff treated her—'They always used to try and lower me because I was a pupil and they was the teachers. And I wasn't going to have it. Because there's no way that someone you don't even know can, like—make you something that you're not. Because there was never any sense of a relationship between a pupil and a teacher. It was just—"you're a class, you're so and so and that's that".' She made it clear that she would not accept being 'treated like a kid' when 'we was nearly adults, weren't we'. Her opposition made her increasingly conspicuous to both teachers and class-mates. She began to feel picked on: 'Every lesson I went into they was provoking me, trying to make hints, trying to annoy me instead of leaving me alone and letting me get on with it. And then you got other people in the classes throwing things about and shouting and they come and blame you 'cos you're the ringleader and all that . . . yet you're sitting there doing your work; you've got nothing to do with it.' The only way Toni found of surviving what she saw as a constant attack on her self-respect was to attend selectively: truanting from games, chemistry and other lessons she disliked, attending for commerce and typing which she 'really loved . . . my commerce teacher never said a word against me 'cos I was always there and willing to learn.'

Toni's attack on school had a personal basis. What she refused to accept was the assumed relationship between the teacher and the taught. Given that, she could still name individual teachers she felt had been different: a 'really

lovely' history teacher in her third year who would always take the trouble to explain problems individually 'even if it took all lesson'. For Carl it had all been 'shit'. What he attacked was the whole school system. 'Put it this way. When you go to secondary school, right, you all start off like cattle . . . put into little groups and all that bullshit on your first day, and there's all this military type basis in school. And they shit the living daylights out of you your first time there.' At first, he admitted, he had not been so prepared to damn school, partly because of his received belief in the value of education, partly because 'there wasn't much I could do about it, see, 'cos when you're younger, you're a bit more scared of your parents, teachers, police and all this.'

For nearly three years at Jessop he avoided serious confrontation: 'The reputation I had in the second and third year was as a kind of joker, playing the fool . . . it was all gimmicks . . . like we dressed up in Eton clothes once to go to school, to take the piss out of the uniform.' Games he enjoyed. English he liked—'I was just good at it. It wasn't an accident, I was trying . . . I wrote horror stories . . . they thought I was a bit in the head to keep writing them.' English, he said, was the only thing he was good at. By Christmas time of his third year he was 'just swaying like from good to bad'. With the exam course approaching he had to make the key decision—to accept that academic success was vital or to find a role in opposition to the school system. In rejecting academic success, Toni felt she lost nothing of value. Carl had no such easy confidence: his father had made him highly aware of the status rewards of education. To avoid the stigma of academic failure, he had to deny the validity of the reward system itself. 'We had it in for all those brainy sods in school . . . it was all a ratrace school . . . It's all the fucking brainy middle-class bastards . . . it makes you fucking sick and they think they're so good with their talk about going to the sixth form and all that bollocks about the good jobs they're going to get . . . That's what screwed us up.' His statement invited a challenge: had he not been a 'brainy middle-class bastard'—in disguise? 'Yes I know I'm brainy. I knew that and the teachers knew that . . . but I don't want no part of it.' His best mate, he claimed, had been 'brilliant at mechanics'; he had been brainy 'in other ways'—yet the school gave no recognition to non-academic success. The rewards were dependent on conforming to the school's model, being identified as middle-class, part of the 'system'—and that he couldn't accept. Glue sniffing may have provided some escape from what he saw as a seductive pressure to conform. But the anger he felt at being lowered (to use Toni's term) carried him further than her verbal counterattack: into the total rejection implied by the punk ideology and into physically terrorizing the 'brainy bastards'—'They had it in for us. Talked behind our backs. Called us wankers and all that.'

(Grunsell, 1980, pp. 27–30)

Comment Toni and Carl's disruption has different roots, and means different things. For Toni, the problem is the clash between the adult role she fulfils at home, and the child role she is expected to play at school. Carl seems to have combined his sense of the oppressive nature of society with a rejection of the value his father attached to education, possibly because that way he could avoid appearing to have failed academically.

It seems to me that in neither case could an adequate explanation of their actions be given through the procedures Leach and Raybould advocate, although they do at least recognize the need to explore settings beyond the school. Furthermore, I can't see how the problems Toni and Carl face could be resolved by setting individual behavioural targets for them. The problem is not just their behaviour, but the conflicting situations they are put into and their reactions to them. How could a behaviour modification programme which actually reinforced the child role Toni so resented help her?

3.16 Toni and Carl face the problems of a social system and conflicting identities that they found difficult to cope with. Many other disruptive children have the same problem. Very few children are just purely nasty for no reason at all. You might think about an alternative response their school might make to Toni and Carl to resolve the conflict between themselves and the school. Many similar descriptions of children whose values and social context lead them into conflict at school are described in *Disaffected Pupils* by Cathy Bird, Rosemary Chessum, John Furlong and Daphne Johnson (1980).

The role of behaviour modification

3.17 I shall now look at the role behavioural techniques play in the education system from two angles: first, their role for educational psychologists, and second, their role in the school system.

Educational psychologists

3.18 Many psychologists in special education rely heavily on behaviourist techniques as a professional basis on which they establish their claims to expertise. But I claimed that many of the techniques used are versions of long-established practices. How far, then, is behaviour modification simply a territorial adventure on the part of psychologists, grabbing for themselves practices that are properly the province of teachers?

3.19 One clear example of this is provided by the work of Ewen Rennie (1980), an educational psychologist in Kirklees. Rennie describes two different 'behaviour modification strategies' which 'were used to shape the work behaviour of a whole class of ten-year-old children'. One of these 'games' as he called them went as follows:

> Good morning, children! I have come to see if you can play a game for us. Remember that last Friday Mrs A. divided you into two groups, well this morning while you are writing your stories Mrs A. and myself are going to keep a note of the number of times people talk to their neighbours and get out of their seat without permission. We will do the same thing every morning for the rest of this week and on Friday afternoon the team with the lowest score will do some painting while the rest do some more work.
>
> (Rennie, 1980, p. 186)

3.20 Ewen Rennie says: 'the term "games" was used as a euphemism for behaviour modification strategies', but having read what his games consist of, I'm more tempted to say the term 'behaviour modification strategies' was used as a euphemism for games. I can see nothing in this game but the kind of strategy any teacher might use to control children. An experiment which shows how easily the practice may be detached from the theory is provided by Woolfolk *et al.* (1977). They showed teachers a videotape of a token economy operating in two versions. One had a commentary in behaviourist terminology and one in the terminology of humanistic psychology. Both videotapes made equal sense, and in fact, teachers responded more positively to the latter version.

3.21 To be fair to Ewen Rennie, there is a difference between what he did and most ordinary teaching, but it does not lie in the teaching. It lies in the fact that he measured the amount of disruptive behaviour before and after the game was introduced and so could evaluate its effects. But the psychologist would seem a sorry beast indeed if his only skill involved sitting in a classroom counting misbehaviours, and it would be unfair to say that this was his total contribution in this case. It was not: he had an idea. But teachers have ideas too, so to what extent does the psychologist gain his prestige and status, not by his knowledge, or his expertise, but by his terminology? The expertise involved in behaviour modification is a matter of degree: I think that such thoroughly systematic programmes as operate at Beech Tree House do require considerable expertise, but the expertise is not to do with theory, but with experience and the ability to think clearly about a problem. With such difficult children and in an institutional setting, behaviourist techniques offer clarity and consistency. Further along the scale, I have seen many cases when I can't for the life of me see anything requiring expertise not possessed by teachers—you might keep your eyes open for these.

3.22 But there is also a danger that the formalization that behaviour modification offers, and the way the techniques can limit one's view, can become not just an equal replacement for teaching but an impoverishment of it. An indication of how behaviour modification can be used is given in an issue of the *Newsletter of the Association of Behaviour Modification with Children* devoted to one school for maladjusted children (Fry, 1980). Here, all its teachers attended a course on behaviour modification and then implemented programmes with individual children. Out of a dozen, only one is concerned with getting the child to do anything new. The remainder are concerned with reducing isolated disruptive behaviour.

The school system

3.23 A number of psychologists who are critical of our existing special education system and advocate integration argue that behavioural techniques offer a way of promoting that integration. For example, David Galloway claims that, 'adjustment groups, sanctuaries and special units in ordinary schools [give] the child and his teachers a breathing space . . . in a rather different way, the same can be said of behaviour modification programmes' (Galloway and Goodwin, 1979). It seems to me that the opposite point of view can be more readily argued—that behaviour modification can divert attention from the pressures in the school system that create the demand for segregated provision in the first place, and thus ensure a continued rejection of many pupils.

3.24 This argument has wider applications. James Holland, who bears the distinction of having written a book with B. F. Skinner, attacks much current applied behaviourism for naively tinkering with problems which require more widespread and difficult solutions. In his own jargon he says: 'even when the problem behaviour is as widespread as alcoholism and crime, behaviour modifiers focus on "fixing" the alcoholic and the criminal, not on changing the societal contingencies that prevail outside the therapeutic environment and continue to produce alcoholics and criminals' (Holland, 1978, p. 163). He describes many behaviour modification programmes in which alcoholics are picked up off the streets by the police, 'rehabilitated' in a treatment clinic, only to return to the very same conditions that generated the problem. A similar fixing of the individual is just as likely to take place in education. Take this opening remark from a thoroughgoing review of behaviour modification in British education: 'it would seem that learning and behaviour problems are more widespread and more gross at the secondary level of schooling and indicate a greater need for a behavioural approach' (Merrett, 1981, p. 13). They might equally be said to indicate that something more widespread is amiss with the organization of secondary education. Behaviour modification runs the risk of trying to solve the individual's problem in a make-shift way, but because it is geared towards *individuals*, it also may miss altogether the problem, the 'contingencies' that are actually determining the behaviour. You may have noticed that what behaviour modification procedures all have in common is that the clients are relatively powerless or undesirable groups in society—criminals, sexual deviants, the mentally handicapped, the mentally ill, and alcoholics. Although B. F. Skinner proposes that we submit governments and officials to behaviour modification, it doesn't happen in practice. So, although the theory of behaviourism says that human action is explained by interactions between the individual and his environment, when it is applied to disruptive children it often leaves important parts of the environment unnoticed, unchallenged and unchanged.

3.25 This argument is also relevant to other groups of people at whom behaviour modification is often aimed. Roger Baker, John Hall and Keith Hutchinson (1974) began a token economy programme in a mental hospital with chronic schizophrenics. Their aim was to increase the sociability of these people, to get them more interested in caring for themselves, and to reduce the frequency of bizarre and embarrassing behaviours. They introduced the change in stages. First of all they moved patients into the experimental ward which was smaller, more comfortable and colourful, with more staff than their previous ward. After six weeks, they began to provide many extra activities: patients were given responsibility for specific tasks like washing up, visits took place, trips out, games, books, newspapers were available. After another three weeks, they introduced tokens, but they were simply paid as a daily ration as a right, and were not contingent on the desired behaviours. Finally, after another seven weeks the token had to be earned for certain behaviour and tasks. Baker and his colleagues found that there were dramatic improvements: people began to look after themselves more, they became less withdrawn, some of their psychiatric symptoms declined. But the bulk of these changes happened before the tokens appeared. Significant improvements did not occur when the tokens became contingent on desired behaviour, in fact some symptoms of psychiatric disturbance grew worse at that point.

3.26 At Northgate subnormality hospital in Northumberland, Vince Gorman and his colleagues are in the process of moving all the children and young people under the age of 21 out of the hospital and into small houses in the community. They have based their work on ENCOR (see Unit 10). At the time of writing (late 1981) they had started one house on a council estate in a small mining town, for five children, some of whom are

profoundly handicapped. The principle they have followed is to make everything just like an ordinary house, so that, for example, the children have free access to the kitchen—something they rarely had in their villa at the hospital. The staff have been very surprised at the changes in the behaviour of the children since they moved. Heather, aged nine, one of the most handicapped, is now beginning to learn to step, because for the first time she has stairs where she lives. Marion, aged 14, was a very disturbed child who was not toilet-trained and had no regular sleep pattern. Caring for her in the house has not been easy, but all the plans for a behaviour-modification-based toilet-training programme have been dropped as she soon learnt to use the toilet in the house. Indeed, the staff at Northgate said that they had to throw away all the planned programmes for the children as many became redundant and others irrelevant in the new setting. They are now able to plan more relevant programmes. Changes in the children have been wrought by the new opportunities they now have to help in the house, socialize, go out shopping and do all the things we take to be part of our normal environment.

Summary

3.27 I have considered behaviour modification, not as a set of theories and experimental results conducted by psychologists, but as it is practised in British special education. I have argued that for some children, like those at Beech Tree House, behavioural techniques have offered positive help. Their chief advantages are to secure clarity of purpose and consistent treatment. However, I argued that for disruptive and difficult children, behavioural techniques do not offer, in principle or in practice, a solution to their problems. I tried to show that many techniques predate the jargon and professionalism of behaviour modification, and that the translation of these techniques into behavioural terms can make them more rigid and less useful. Finally, I tried to show how, although behaviourism is an environmental explanation of human action, its application very often ignores all-important parts of that environment.

4 *Child development*

Introduction

4.1 The branch of psychology that many people believe is most helpful in special education is the study of children's development: the acquisition and growth of the skills and abilities involved in talking, understanding the world, moving about, getting on with other people, looking after one's self. This field has witnessed an enormous expansion of research in the past fifteen years to become one which attracts more research money and more status than almost any other part of psychology. This has lead to attempts to apply knowledge gained from studies of normal children's development to the education of handicapped children. The influence has been greatest in the education of mentally handicapped children. Thus far, the impact in other areas has been slight.

4.2 In this section I shall explore how much the study of child development can tell us about how to educate mentally handicapped children. I shall argue that although the study of child development can offer teachers ideas and options, it cannot constitute a curriculum, and its application runs the same risk of formalization and distortion of learning that I described in Unit 5/6.

Development as a curriculum

4.3 One defining feature of mental handicap is that children so impaired fail to acquire many skills and abilities that are normally acquired without formal instruction, and other skills and abilities are very delayed. Parents notice delay in a variety of ways: some, like two mothers I spoke to recently with teenage children, notice a delay in physical development. In both these cases, they noticed their children, when they were about three

months old, were not yet holding their heads up. Another mother, of a less handicapped boy first became concerned about delay when her son was two: 'He was very slow at speaking and he wasn't making any headway at walking . . . you'd put him down and he sort of rolled about and crawled about on the floor but he would never stay on his feet or walk . . . and he never held pencils or any toys or anything . . . he just lay there'. Parents notice delay in the skills that they are familiar with and which mean something to them: language, play, walking, holding the head up.

4.4 Delay persists. Mentally handicapped children become mentally handicapped adults, often with very limited competence. For example, in a study by Leeming *et al.* (1979) of over 1300 children in ESN(S) schools, it was found that of the young people aged 16 and over, 42 per cent were described by their teachers as not yet using recognizably grammatical sentences, 22 per cent were not yet putting two words together in their language, and 17 per cent had yet to use single words.

4.5 One response to incompetence of this order is to think of the task of education as devising ways of teaching the skills that normal development entails. This is the approach adopted, for example, by Chris Kiernan and his colleagues:

> The most obvious and fundamental problem of mental handicap . . . [is that] the mentally handicapped child does not learn spontaneously, he does not teach himself. Because of this he does not learn the basics of dealing with the physical world or the basics of social interaction.
>
> The solution looks equally obvious. We must find out what he is failing to learn and teach him. Then he will have the grounding which other children have and he will be able to go on from there.
>
> Unfortunately, although the solution is clear enough, we lack many of the essential tools for putting it into practice. First of all, we do not know enough about how the very young normal child does learn. We know that he learns words, learns to reach and grasp objects and learns to walk. But we don't know much about the process behind these first words and first actions. Second, the severely mentally handicapped child has often suffered brain damage. Consequently, even if we did know more about the detail of normal development, it would not necessarily help us to teach the mentally handicapped child. What we need to know is how to reach the goals of normal development even if the normal route is not open to us.
>
> We do know that the mentally handicapped child lacks some of the basic strategies for learning which the normal child uses. We know that he does not play in the same way and that his social responsiveness is different. So one thing we should aim to do is to teach him these basic strategies. In addition to teaching him how to play, we need to ensure that he is socially responsive, that he can and does imitate, that he has some means of communication, so that later on he can learn to ask questions and to act on answers.
>
> (Kiernan *et al.*, 1978, pp. 18–19)

4.6 Chris Kiernan's approach is, first, to understand what is entailed in normal development, and secondly, armed with that knowledge, to teach these things to mentally handicapped children. I shall next describe some curricula that attempt this, and then offer my criticisms.

Language development

4.7 Because communication is so important in so many ways, many people have argued that teaching communication, and specifically language, should be a central part of the curriculum for mentally handicapped children. One of the many recent developments is *The First Words Language Programme* by Bill Gillham (1979). This is a programme aimed at children who are just beginning to understand and produce words and its purpose is to increase the size of children's vocabulary. It is based on simple principles. First it identifies three levels in the emergence of new words:

> demonstrating—focussing the child on the word and what it refers to
>
> choosing—getting the child to show understanding of the word by making a choice, e.g. of one picture from two or three
>
> using—bringing the word into a conversation or improvised story involving dolls, models, puppets, and so on.
>
> (Gillham, 1979, p. 15)

4.8 These three levels of development are meant to be taught in sequence. They correspond to the three levels that have been studied in normal children's development—concept, comprehension and production. It has been argued that before a child understands or uses a word, he must first have a non-verbal understanding of what the word refers to. This is gained through acting on and using objects and people. Similarly, it is argued that before he can use a word he must have some understanding of it. Bill Gillham gives examples of games and materials which can be used to teach at these three levels. For example, the 'choosing', comprehension level can be taught with a 'smartie board': a piece of wood with three holes in it of smartie size which are covered with three objects or pictures. The teacher puts a smartie under the correct choice and says, 'Find the ____' or 'It's the ____,' and the child must identify the object in question.

4.9 The other main component of the programme is the 'goal vocabulary'. The programme gives a guide to the choice of words to teach by listing the words that have been most commonly found to occur in the early language of English and American children. These are divided into four groups: *topic words*, referring to objects and people; *action words*; *qualifiers*, such as 'big' and 'hot'; and *personal/social* words, such as 'bye-bye' and 'ta'. Bill Gillham is careful to point out that the list of words is only a guide: the most important factors in the choice of words are the child's interests and environment.

4.10 The programme distinguishes two ways of teaching words: one is individual structured teaching sessions, and the other is incidental or informal teaching. The emphasis, as with most language programmes for mentally handicapped children, is on the first: 'What we are sure of is that a systematic structured approach, provided it is used with sensitivity and imagination, is more likely to be effective than a vaguely "stimulating" environment' (Gillham, 1979, p. 51).

4.11 The first question in evaluating this programme is: how much does it actually owe to the study of language development, whether in normal or mentally handicapped children? It seems to me to owe relatively little, and some of what it does owe is contentious. Although some developmental psychologists, such as Ingram (1974), do believe the comprehension of words precedes their use, such a global relationship is highly implausible because it assumes that understanding a word is a fixed quantity—that a child either does not understand a word at all, or understands it completely. This is both logically and developmentally incorrect. It is logically incorrect because what is understood by a word may change. Although I use the word 'atom', my understanding of it is very different from a physicist. Children, often, in using a word, apply it too widely or incorrectly. Many examples are provided by Eve Clark (1973). So using a word is, for normal children, a way of developing their understanding of it.

4.12 An important consequence of this argument is that mentally handicapped children do not show full or fixed understanding of a word just by responding correctly to a choice task like the smartie board: they show one particular and limited aspect of understanding that word. But this is not to dismiss the value of making the distinction between understanding and producing a word, if it helps people to see that language teaching is more than getting children to say things.

4.13 In identifying a list of goal words to teach, Bill Gillham also used knowledge of child development, but the value of this statistical evidence is very doubtful. It provides only a guide, and one that would be correctly disregarded, as he says, if there are other more relevant words to learn for a particular child. The distinctions between topics, actions, qualifiers and personal/social words are useful because they point to the range of words involved, but this is a very simple classification of first words, and not one requiring detailed knowledge of development.

4.14 A much more complicated classification of the elements of early language is provided by Leeming *et al.* (1979), based on the classifications used by many researchers working on ordinary language development in the early 1970s. This curriculum is based on a set of early meaning categories that normal children customarily use, such as 'agent', which refers to people doing things, and 'recurrence', often realized as the word 'more'. Outlining in this way what normal children's early language achievements are can help to provide options for teaching, but the contribution such classifications can make is limited

because they do not explain the processes individual children go through in developing the use of the components of language. Although the outcomes of language development at various stages—the meanings children can make, the grammatical structures they can use—are usually similar for different children, the ways in which they go about acquiring those skills are very different. For example, Bloom, Hood and Lightbown (1974) showed that some children imitate adults a great deal, but others seldom do. Nelson (1973) found that some children predominantly learnt words which refer to objects in their environment to begin with, whereas others predominantly learnt personal/social words, such as, 'Hi,' and, 'Bye-bye'. Some of these differences in the way children learn language have to do with what their parents do with them. Elena Lieven (1982) describes the differences between two young language learners:

> Kate's mother is highly responsive to Kate's utterances, hardly ever misses an opportunity to expand on them, and is accepting of what Kate says. By contrast, Beth's mother appears to have a more utilitarian attitude to language and uses it for getting everyday things done and to encourage Beth to use correct referential speech. She expands Beth's utterances at a very low rate and, unlike Kate's mother, does not really engage in play talk or in talk about the world. Beth is a child who, at much the same age as Kate and with very similar lengths of utterances, says very little in terms of lexical specificity . . . Her speech seems very closely tied in to a small number of words used for attentional ends. Kate is already using her speech to engage in complex negotiations with her mother, to joke, to contradict, and to comment explicitly on the world. These skills gave her, at least with her mother and myself, a distinct edge on self-assertiveness over Beth. Whether such skills would have been either welcomed or recognized in Beth's family is open to question. The message that Beth is getting is that language is not for engaging in a game—thus there is an emphasis on correct speech and on the mother defining the topic of conversation. Given that Beth's mother is also unwilling or unable to elaborate on Beth's utterances in such a way as to keep the conversation going, Beth is left much more to her own devices in her attempts to produce utterances.
>
> (Lieven, 1982)

4.15 Kate and Beth, when they grow up, will both be competent speakers of English, but the course of their *early* development depends upon their experience. Teaching language intentionally is as much a series of individual experiences to the child as the early language experience of normal children, but neither of the language curricula I have described, which describe the products of development, not the process, can tackle this problem. No doubt mentally handicapped children differ among themselves in the way they learn language just as much as do normal children, and a central problem in teaching is to respond to those individual differences.

Cognitive development

4.16 Language is an area in which mentally handicapped children are obviously delayed, and it is relatively easy to specify what a child can and cannot do. Thinking, and understanding the world, are less familiar and more difficult matters to deal with. We know mentally handicapped children are slow, don't understand and so on, but it is not obvious what the components of understanding are. The psychology of child development has had a large influence in shaping our ideas about the development of children's thinking and about the role of education in developing children's intellectual powers. Most influential in this country has been the work of Jean Piaget and his many followers. Piaget's work was acknowledged as an influence on the Plowden Report on primary education (Central Advisory Council for Education, 1967), and has been the basis for several recent curriculum developments in secondary education (see chapters in Floyd, 1979). His work has also been highly influential in writings on the education of mentally handicapped children.

4.17 Piaget's purpose was to explain the development of logical thought, best exemplified in the conduct of scientific experiments. Indeed, the tasks he used to assess adolescents' acquisition of the most sophisticated kind of thought, which he called formal operational thought, are models of scientific experimentation. Tracing the emergence of logical thought about the physical world, Piaget investigated the growth of children's understanding of general concepts such as volume, number, categorization of objects and the ability to make inferences. An understanding of the properties of liquids, for example,

is something we take for granted, but Piaget showed that before a certain age—usually around six or seven—children respond to liquids as if they change volume depending on the shape and size of their container. This, and other results which show that an understanding of the 'conservation' of quantities takes time to develop, prompted many teachers to devise teaching programmes and experiences designed to develop this understanding.

4.18 Another very basic understanding Piaget investigated was the understanding that objects exist independently of the person observing them. Piaget claimed that before about 9 months, children do not understand this: they act as if objects cease to exist when they no longer see them. This understanding is known as 'object permanence'. Piaget assessed it by finding out if children would search for objects covered by a cloth or some other barrier. Several people have suggested that this component of the development of thinking can be taught to mentally handicapped children who do not show an understanding of object permanence. This is what Chris Kiernan and his colleagues suggest:

> Assuming that there are no problems with his ability to look, reach and grasp, teaching object permanence should be straightforward. Use an object which you know he will be keen to reach for, and a piece of plain cloth as a cover. Place the object immediately in front of the child . . . Allow him to reach for it once or twice without using the cloth, and once he has the idea of what is required, cover the edge of it with the cloth.
>
> (Kiernan *et al.*, 1978, p. 116)

The teaching then progresses to retrieving the object completely hidden by the cloth, to using new objects and covers, then delayed searching for the object, then hiding it under one of two cloths.

4.19 Even if a child went through such a teaching sequence and mastered the task, can we then conclude she understands the permanence of objects ? I think not, for this would be to confuse understanding and performance. Children's understanding of objects arises through many varied experiences, and the psychologist observes the result of these experiences in an experimental task that is taken as an index of the child's understanding. Putting a child through this task however does not encapsulate all the experiences of development. It is simply one task and performance on it cannot be taken to mean successful performance on other similar tasks, and even less the application of object permanence to new problems.

4.20 The problem is that the psychologist is interested in general structures like 'conservation' and 'object permanence' which grow from many individual experiences children have. These are the products of development. But *teaching* is part of the *process* of development which cannot be circumvented by assuming that the psychologist's experimental setting is somehow more important in development than other experiences. A curriculum is not a series of achievements, but a series of tasks. So far, developmental psychology has provided a list of achievements, but describing the tasks which will lead to those achievements is a job of quite a different order. I am not sure whether psychologists could ever discover the nature of the tasks of development, because a task is what a child makes it. The same toy can be used in many different ways. It may be possible to say what constraints some tasks impose on children, and what opportunities others may open up for them. This is the information needed to design a curriculum.

Structured teaching and the idea of overcoming mental handicap

4.21 In virtually all attempts to apply the psychology of child development to teaching mentally handicapped children has been the idea that the best kind of teaching is highly structured individual sessions, generally involving the specification of objectives to be achieved within that session. This is often coupled with the idea, expressed earlier in this section by Chris Kiernan and his colleagues, that if we can identify in more detail the components of development then these can become the objectives of individual teaching sessions. In effect, we would be teaching development. This approach is also often supplemented by statements such as, 'We must also teach children to generalize their skills'. The idea is that the individual teaching sessions add a skill or ability to a child's

repertoire, and the rest teaches the child to apply that skill or ability. Chris Kiernan and his colleagues, primarily concerned with profoundly mentally handicapped children, seem to suggest that if taken far enough and for long enough, this approach could almost turn them into normal children.

4.22 I think this orthodoxy can be challenged, but in doing so I am not suggesting that education for mentally handicapped children is a waste of time. First, there are problems with the idea of structured teaching sessions. *All* interactions between teacher and child have a structure and an organization, and in judging the worth of one-to-one teaching we need to see the consequences of adopting this *particular* structure. In Unit 5/6, Des Power (Reading 6.3) argued that very often these kinds of sessions result in very artificial exchanges. One frequent (though by no means necessary) feature is that the child responds to what the teacher does, and initiates very little. This is largely a direct result of a setting in which teacher and child sit down at a table with a set of materials and a set of objectives in the mind of the teacher. The child tends to become the responder. In some books and articles, this role supplants all else: there is, for example, no hint of anything else in the recommendations for teaching language in Janet Carr's book for parents and teachers, *Helping Your Handicapped Child* (1980). But language is a means to express one's self, to get other people to do things, to promise, to apologize, to abuse and so on. What kind of structure would help to develop these skills?

4.23 Second, we have seen that teaching the products of development does not amount to development itself. Development for normal children is a process of constant and varied interaction with the environment, and this can be no more circumvented for normal children than it can for mentally handicapped children. A great attraction of highly specific teaching based on objectives such as, 'The child will select the correct picture when I say "Show me the cat",' is that the teacher sees a change in performance, but if this teaching produces *no more than* that performance, then it has primarily satisfied (deceived?) the teacher, rather than helped the child.

4.24 And what of the idea of teaching a skill and then generalizing it? I have argued that there are no grounds for giving a special place to the performance learnt in a specific teaching session such as the one used to teach object permanence. Therefore, the task is not to generalize the skill but to teach other performances out of which may grow understanding. But the question arises, 'If we can no longer give any primacy to the psychologists' tasks, what tasks are we to use?' To answer this, I think one is lead back to the everyday tasks that children perform in their day-to-day lives, and to selecting those tasks which are most relevant to the child's interests and capabilities. This requires understanding children not as collections of developmental products—as conservers or non-conservers, as possessing object permanence or not, as uttering single words or not—but as doing certain things in certain ways in certain contexts—as able to brush their teeth, as able to draw, as able to sing a nursery rhyme. The task of teaching then becomes one of supporting children in their natural environment, and extending their power to deal with that environment.

Reading Now read: 'Mind's of their own: one teacher's philosophy' (Case Study 27).

Comment (a) Gerry Serpell-Morris emphasises the decisions about what to teach to mentally handicapped children, which must be based on what we value. In trying to resolve this problem, we must bear in mind children's relationships with their immediate environment.

(b) He rejects the idea that education should be planned as a preparation for adult life. Mentally handicapped people's abilities are often limited to particular settings: they are not very adaptable. But in specific settings they can become very competent. So for preparation to make any sense, a teacher would need to know the setting a mentally handicapped child is bound for. This is usually not known.

(c) He emphasizes the personal development of mentally handicapped children, wishing to see 'a viable personality at ease with himself and others'. Psychology tends to promote a view of mentally handicapped children as collections of deficits, but parents often talk of their children as individual people with characters, however incompetent. One father described his son to me in this way: 'He was a vegetable as we thought to begin with . . . he became a little individual with a mind of his own. He knew exactly

what he wanted, and what he wanted to do. Very incompetent and very handicapped, but certainly a little personality developed if you like, struggling hard to get out'.

(d) Gerry Serpell-Morris recognizes that mental handicap is not just an educational problem. It is also a problem of providing an environment and services in adulthood to provide maximum 'freedom and choice of action'. In Unit 4, Richard Tomlinson added the rights to participate and to love to that of independence as basic human rights. In contrast, Chris Kiernan and his colleagues say that mental handicap is 'an educational problem which can be helped only by educational means'. To what extent could this claim divert attention from other ways of tackling the problem by changing the role of mentally handicapped people in society? What purpose is served by giving mentally handicapped children skills and knowledge if they are denied the means to use them as adults?

Reading Now read the second part of 'The role of psychological research in special education' by Chris Sinha (Reading 6.1), from p. 406. In this part, he considers what kind of psychology might be more relevant to special education, and what kind of relationship between researcher and teacher is needed.

Comment (a) In his section on the Bristol Teacher Research Group, Chris Sinha notes that teachers gave psychological descriptions of children, because 'the terms of reference of special education are basically psychological'. But this may confuse describing children with educating them, for the latter involves not just scientific argument but also moral judgements about what to teach, and how to design social arrangements.

(b) Although the strategy for collaboration brings teachers and researchers closer, how far is the goal of collaboration that of research, and how far is it education? We learn that the group conducted experiments and learned more about 'learning processes', but has the strategy effected better classroom practice? A limitation of the approach is that the researchers, by staying out of the classroom, have made it difficult to see what effects, if any, their research might have.

(c) Correspondingly, Chris Sinha's redefinition of the role of psychology ('articulating and making explicit the goals and processes of interventionist practice', the Reader, p. 412) means that psychologists have to concern themselves with real children in real classrooms. They would then cease to be interested in 'the abstract and universal psychological individual' (the Reader, p. 403), and might have to relinquish many cherished practices such as laboratory experiments.

(d) The recent developments in developmental psychology Chris Sinha describes in his final section may not as illuminative prompts for special education. But a concern with individual processes of development means a concern to understand individual children in the context of their families, schools and neighbourhoods. This would have to be the starting point for a knowledge relevant to education.

Summary

4.25 In this section, I have attempted to show that the psychology of child development may offer ideas and illumination for educators, but it cannot offer education. Theories arrived at in the laboratory or observation room may be incorrectly applied if they fail to recognize individual variation in learning, however much its product may be common to all children. Psychologists have tended to study general achievements in development, such as the idea of object permanence. This is a product that takes time and experience to emerge, and is not one that may simply be taught by mimicking psychologists' experiments. Structured teaching of the products of development may be particularly misleading if it leads people to suppose that children are gaining an understanding similar to that of a normal child.

4.26 Finally, the application of the psychology of child development, however much it gives ideas and options for teaching programmes, is also a misleading enterprise if it leads us to suppose that our response to mental handicap must be principally aimed at educating the child. However much we may expand children's communicative and social skills, our efforts are misplaced if the only future for mentally handicapped people is an impoverished life in institutions.

5 Conclusion

5.1 I began this unit by arguing that the conventional view of the application of psychology to special education—handing on expert knowledge to naive practitioners—does not stand up to scrutiny. Some psychology has been shaped by the education system; psychology may be used to the benefit of one part of the system and to the hindrance of others; the favoured ideas are those which are reasonably compatible with existing practices, and which do not produce political conflict.

5.2 However, the use made of psychology is not completely determined by the political structure of the special education system. Ideas which are prevalent amongst psychologists do get actively promoted and taken up where there is a market for them. This is the case with behaviour modification and child development.

Educating and understanding children

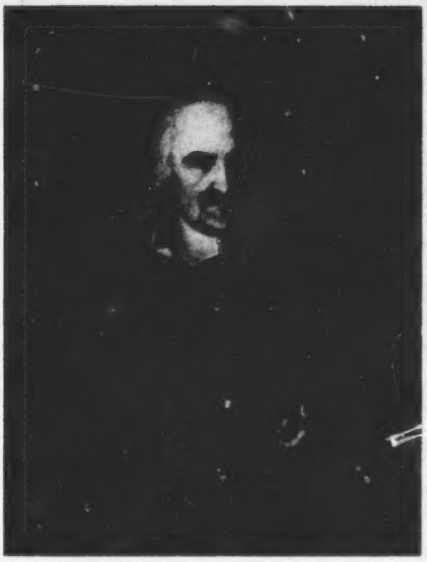
5.3 One important question any teacher faces is, 'How do you justify your actions in educating children?' Some answers are not particularly satisfactory. Among these are, 'I do what I am told;' 'I do what I have always done;' 'I do what takes my fancy'. A more satisfactory answer is one that demonstrates the relationship between the actions of the teacher and their consequences—the goal that is achieved. Even here, some kinds of goals are generally deprecated, such as, 'Keeping them quiet until the end of the lessons'. Goals that are more generally approved are of two kinds: those which are framed in terms of benefits to children, and those which are framed in terms of benefits to society. Among the former are being able to read, getting a well-paid job, enjoying yourself. The latter include fitting people for the demands of industry, making people conform to the law, giving people a sense of duty. Not surprisingly, there is a great deal of disagreement as to which of the two kinds is most important, and within each kind, which precise goals should actively be taught, but there is little dissent that it is difficult to be rational about education without some goals.

5.4 As well as having a goal in mind, in order to teach we also need some knowledge about and understanding of the children to be taught. What do they understand at the moment? How far are they from achieving the goals we have set? How can we match their interest and abilities to the goals we have set?

5.5 The relationship between the goals of education and our understanding of children is a complicated one. Particular understandings lead to particular educational interventions. I have tried to show that the understanding psychology offers has, at times, had adverse consequences for education.

5.6 Behaviourism explains human action in terms of the facts about individuals: what can be observed and recorded of their history, their immediate environment, and their behaviour. Consequently, the kind of intervention it produces is aimed at close observation of the behaviour of an individual child, and then changing it. But I argued that an adequate explanation of much behaviour entails facts, not about individuals, but about social institutions. This is easy to see in some cases, such as those of writing a cheque or waiting at a bus-stop. Explaining these actions entails references to banks and public transport, and it would be very difficult to make sense of them without these social facts, using only observation of the actions of the individuals. Not so easy to see is the possibility that explanations of aggression also must entail facts about social institutions. I argued that Toni and Carl's actions were explained in terms of conflict between social institutions—family and school—and between institutions and the individual. Intervention growing out of this kind of understanding of human action might be aimed not at the individual but at the institutions.

5.7 Developmental psychology has shaped the goals of special education differently, although it has had in common with behaviourism a propensity to isolate children from their social context and to offer explanations of human actions in terms of facts about the individual. The goal of much developmental psychology has been to understand the development of abstract thought. Piaget saw the final achievement of that process as the



Thomas Hobbes (1588–1679), precursor to modern psychology: 'it is necessary that we know the things to be compounded before we can know the whole compound'.

Emile Durkheim (1858–1917), sociologist, by contrast maintained that: 'every time that a social phenomenon is directly explained by a psychological phenomenon, we may be sure that the explanation is false'.

ability to reason scientifically about the physical world. The knowledge that has accumulated under that banner is an understanding of the emergence of structures of thought that may be applied to many tasks. These include classification, making inferences, and number. The example I discussed at length in section 4 was object permanence. In the application of developmental psychology to education for mentally handicapped children, these structures have become parts of the syllabus, most often in the form of check-lists of achievements. What should have remained a moral issue became a scientific issue: the curriculum was justified in terms of a particular kind of understanding of children, which was determined not by the goals of educators, but the goals of scientist-psychologists. This is not to dismiss the relevance of existing or future developmental psychology, but to understand its actual or possible relevance requires an educational theory. The outcome of that theory may be to accept or discard part or all of the understanding of children that psychology provides.

Teaching in context

5.8 One feature of *any* educational theory is that it will be concerned with children's actions in their social context, for children always and only do things in the context of a family, a neighbourhood, a school, a social class, a culture. Education is an intervention in the relationship between children and their social context. This is as true of a child learning to play the piano as it is of a mentally handicapped child learning to talk, play games or use money. Indeed, the more handicapped children are, the more obviously their education is an introduction to social institutions. The kind of understanding of children that might help is an understanding of the *tasks* that confront children and their response to them. These are not the tasks of the psychologist's experiment, but the tasks of everyday life: language, the use of money, greetings, and games. Let me concentrate on the first of these. The value of information on language acquisition derived from developmental psychology is that it has given some understanding of the task that a language learner is faced with and how children cope with that task. Even so, as I showed in section 4, the task for each child is different, because social contexts differ. Intervening for any one child involves an *individual* understanding of that child's task, and that in turn means working not just with the child but working with the child *and* her social context. Part of that context is the classroom, but that is a very minor part, for the task of learning language is not one that ceases at the school gate. The understanding we need, then, is of the kind of language tasks that the home, neighbourhood, and the

classroom provide and how a child responds to them. One of the consequences of this line of argument is that there are no longer any grounds for giving precedence to 'structured learning situations', or 'language lessons'. Isolated lessons which do not relate to other settings only make sense if the task only occurs in those lessons. Language is a task for all settings. We may find, on closer study, that the tasks presented in language lessons have little in common with the tasks other settings present. If so, what purpose can they serve for mentally handicapped people, who do not live in an eternal language lesson? Thinking of language as a social task leads in quite a different direction from the view of language as an individual achievement. And thinking of education as a *series* of social tasks leads us away from the psychologist's laboratory and observation room, back into everyday life. The question is, 'Will the psychologist follow?'

The psychologist and the child: whose ideal, whose reality?

Appendix I

Items from the Stanford-Binet Intelligence Scale

YEAR VII

2 Similarities: two things

PROCEDURE: Say: '*In what way are . . . and . . . alike?*'

(*a*) *Wood and coal.*

(*b*) *An apple and an orange.*

(*c*) *A ship and a motor-car.*

(*d*) *Iron and silver.*

It is often necessary to insist a little if [the subject] is silent or says he doesn't know. It is permissible to repeat the original question or to add, '*How are they the same?*' or '*In what way are they alike?*' When a difference is given for (*a*) say, '*No, I want you to tell me how they are* alike. *In what way are wood and coal the same?*' If the child persists in giving differences make no further comment after the other pairs.

5 Opposite analogies III

PROCEDURE: Say:

(*a*) '*The rabbit's ears are long; the cat's ears are . . .*'

(*b*) '*Snow is white; coal is . . .*'

(*c*) '*The dog has hair; the bird has . . .*'

(*d*) '*Wolves are wild; dogs are . . .*'

6 Repeating 5 digits

PROCEDURE: Say, '*I am going to say some numbers, and when I have finished I want you to say them just as I did. Listen carefully, and get them all right.*' Before each series say, '*Listen carefully, and get them all right.*' Pronounce the digits distinctly and with perfectly uniform emphasis at the rate of one per second.
(*a*) 3–1–8–5–9 (*b*) 4–8–3–7–2 (*c*) 9–6–1–8–3

YEAR XII

2 Verbal absurdities II

PROCEDURE: Read each statement and, after each one, ask, '*What is foolish about that?*' The response is frequently ambiguous. If it is not clear that the subject sees the absurdity say, '*Why is that foolish?*'

(*a*) Bill Jones's feet are so big that he has to pull his trousers on over his head.

(*b*) A man called one day at the post-office and asked if there was a letter waiting for him. 'What is your name?' asked the postmaster. 'Why,' said the man, 'you will find my name on the envelope.'

5 Abstract Words I

PROCEDURE: Say, '*What do we mean by . . .?*' or '*What is . . .?*'

(*a*) pity (*b*) curiosity (*c*) grief (*d*) surprise

Responses defining abstract words are often ambiguous. In asking for further clarification of a response, say, '*Yes, but what do we mean by . . .?*' or '*Yes, but what is . . .?*'

A Memory for Designs II

MATERIAL: Card with design.

PROCEDURE: Before showing the card say, '*This card has a drawing on it. I am going to show it to you for 10 seconds, then I will take the card away and let you draw from memory what you have seen. Be sure to look at the drawing carefully.*' Show the card for ten seconds. Let [the subject] reproduce the design immediately, and note which is the top of his drawing.

Appendix 2

An educational psychologist's report

Reasons for referral

Michael is very much below average in his reading ability. He has poor relationships with his peers and appears to be sexually precocious in his interests.

In a structured test situation Michael was very co-operative and appeared confident. When he is uncertain of what to do, however, he becomes rather shy and bashful.

On both occasions that he was seen he was wearing glasses—the first time the glasses he was wearing had been repaired, whereas on the second occasion he was wearing a pair that were obviously rather expensive.

Test findings

Wechsler intelligence scale for children

Verbal scale I.c.	94
Performance scale I.c.	99
Full scale I.c.	96

On the Verbal Scale sub-tests it was found that Michael's general knowledge was rather limited: the same was true of his understanding of social situations. It was clear from his answers that he is very dependent on adult support and lacks confidence when it comes to making decisions for himself. His ability to do mental arithmetic was what would be expected for a boy of his age and vocabulary. There was evidence, however, that his knowledge of English with regard to the words he understands is rather patchy; for example, he defined a spade as something you fry things in. He did not know what a sword was, and he gave as a synonym for hero, 'a thief'. These findings suggest that at times he may be confused in school by even apparently simple instructions. His short-term memory is in the good average range.

On the Performance Scale Michael obtained a standard score of thirteen on the block design sub-test which correlates well with general intellectual ability. This score indicates that Michael is in the high average range of ability. By comparison, he did rather poorly on the coding sub-test in which some of the skills required for reading and writing must be used.

Summary

The fact that Michael needed to wear glasses was not diagnosed until he was five years old. This means that he could have missed out on some necessary experience that would have been helpful when learning to read. He does not now have any visual difficulty but his uncorrected vision in the past could be a factor that needs to be taken into account. He is now functioning at a normal average level although he is immature and his general knowledge is poor. There were indications in the test, however, that his potential is good.

Recommendations

Michael needs additional help with his reading and writing. Since he also has difficulty with poor relationships, it is recommended that he be admitted to the remedial reading class at Laycook school; his progress there will be reviewed as it might be necessary to consider this boy for tutorial class placement.

Additional information

Mrs Smith had Michael when she was thirteen years old. She is now divorced and living with Michael and her parents. She was rather surprised to hear that one of the complaints made by the school was that Michael was talking about sexual matters to one of the teachers. She said that she had no idea why he should do this and certainly he had never seen anything at home. Michael normally calls her by her first name and tends to treat her rather like an older sister.

Michael was given the Rorschach Projection Test and he was very defensive. Nearly all his responses were shape determined, which means that he is very dependent upon

being provided with some fairly rigid structure or framework within which he will feel safe.

When tested to the limits, he did say that he could see a lady in one of the cards and she was just standing there waiting for someone. He thought that when she met whoever she was waiting for they would go back to her house and have a nice chat. It could be that Michael has in fact seen more than his mother is prepared to admit. He liked best the brightly coloured card because of its nice colours and he said that looking at it makes him feel good. A response to colours is often interpreted as a reflection of emotional feelings; Michael's response was rather more mature than might be expected for a boy of his age and could be an indication of enjoyment of physical stimulation. This interpretation must be treated with extreme caution however.

Summary

Michael appears to be a rather immature boy who has not been provided with the structured type of situation that he needs at home. Because of the extreme youthfulness of his mother and her relationship with him, he has been put in a position that should only be expected of a much older child. This has probably resulted in his being unable to relate to other children of his own age, since he has been put in a dual role of baby and surrogate husband. The opportunity to be in a smaller class and with a man teacher might help him to resolve his emotional difficulties.

References

BAKER, R., HALL, J. N. and HUTCHINSON, K. (1974) 'A token economy project with chronic schizophrenic patients', *British Journal of Psychiatry*, **124**, pp. 376–84.

BINET, A. and SIMON, T. (1905) 'Methodes nouvelles pour le diagnostic du niveau intellectual des anormaux', *L'Année Psychologique*, **11**, pp. 191–244.

BIRD, C., CHESSUM, R., FURLONG, J. and JOHNSON, D. (1980) *Disaffected Pupils*, Uxbridge, Brunel University, Educational Studies Unit.

BLOOM, L., HOOD, L. and LIGHTBOWN, P. (1974) 'Imitation in language development: if, when and why', *Cognitive Psychology*, **6**, pp. 380–420.

BRITISH PSYCHOLOGICAL SOCIETY (BPS) (1980) *Psychological Services for Children in England and Wales*, BPS Division of Educational and Child Psychology, Occasional Papers, **4** (1 and 2).

BURDEN, R. (1978) 'Schools' systems analysis: a project-centred approach', in GILLHAM, B. (ed.) *Reconstructing Educational Psychology*, London, Croom Helm.

BURLAND, J. R. (1979) 'Behaviour modification in a residential school for junior maladjusted boys', *Journal of the Association for Workers With Maladjusted Children*, **7**, pp. 65–79.

BURT, C. (1921) *Mental and Scholastic Tests*, London, Staples.

CARR, J. (1980) *Helping Your Handicapped Child*, Harmondsworth, Penguin Books Ltd.

CENTRAL ADVISORY COUNCIL FOR EDUCATION (1967) *Children and their Primary Schools*, vol. 1, London, HMSO (the Plowden Report).

CHILD, D. (1977) *Psychology and the Teacher*, London, Holt, Rinehart and Winston.

CLARK, E. V. (1973) 'What's in a word? On the child's first acquisition of semantics in his first language', in MOORE, T. E. (ed.) *Cognitive Development and the Development of Language*, New York, Academic Press.

FLOYD, A. (ed.) (1979) *Cognitive Development in the School Years*, London, Croom Helm.

FRY, L. (1980) 'Behaviour modification at Lea Green School', *Newsletter of the Association for Behaviour Modification with Children*, **4**, pp. 2–19.

GALLOWAY, D. and GOODWIN, C. (1979) *Educating Slow Learning and Maladjusted Children: integration or segregation?*, London, Longman.

GILLHAM, B. (1979) *The First Words Language Programme*, London, George Allen and Unwin.

GRUNSELL, R. (1980) *Beyond Control? Schools and Suspension*, London, Chameleon Books.

HOLLAND, J. G. (1978) 'Behaviourism: part of the problem or part of the solution?', *Journal of Applied Behaviour Analysis*, **2**, pp. 163–74.

INGRAM, D. (1974) 'The relationship between comprehension and production', in SCHIEFELBUSCH, R. L. and LLOYD, L. L. (eds) *Language Perspectives: acquisition, retardation and intervention*, London, Macmillan.

JONES, M. (1979) 'The children of Beech Tree House', *Special Education: Forward Trends*, **6**, pp. 28–31.

KAGAN, J. (1973) 'The importance of simply growing older', *New Society*, 14 June 1973, pp. 610–12.

KIERNAN, C., JORDAN, R. and SAUNDERS, C. (1978) *Starting Off*, London, Souvenir Press.

LEACH, D. J. and RAYBOULD, E. C. (1977) *Learning and Behaviour Difficulties in School*, London, Open Books.

LEEMING, K., SWANN, W., COUPE, J. and MITTLER, P. (1979) *Teaching Language and Communication to the Mentally Handicapped*, London, Evans/Methuen Educational.

LEYDEN, G. (1978) 'The process of reconstruction: an overview', in GILLHAM, B. (ed.) *Reconstructing Educational Psychology*, London, Croom Helm.

LIEVEN, E. M. (1982) 'Context, process and progress in young children's speech,' in BEVERIDGE, M. (ed.) *Children Thinking Through Language*, London, Edward Arnold.

MERRETT, F. E. (1981) 'Studies in behaviour modification in British educational settings', *Educational Psychology*, **1**, pp. 13–38.

MINISTRY OF EDUCATION (1946) *Special Educational Treatment* (Pamphlet No. 5), London, HMSO.

MINISTRY OF EDUCATION (1955) *Report of the Committee on Maladjusted Children*, London, HMSO (the Underwood Report).

NELSON, K. (1973) 'Structure and strategy in learning to talk', *Monographs of the Society for Research in Child Development*, **38** (1–2), Serial No. 149.

PRESLAND, J. and ROBERTS, G. (1980) 'Aims, objectives and ESN(S) children', *Special Education: Forward Trends*, **7**, pp. 29–31.

PRING, R. (1981) 'Behaviour modification: some reservations', in GURNEY, P. (ed.) *Behaviour Modification in Education, Perspectives*, **5**, Exeter, University of Exeter School of Education.

QUICKE, J. C. (1980) *The Cautious Expert: an empirically grounded critique of the practice of local authority educational psychologists*, Sheffield, University of Sheffield PhD thesis.

RENNIE, E. F. N. (1980) 'Good behaviour games with a whole class', *Remedial Education*, **15**, pp. 187–90.

ROE, M. (1978) 'Medical and psychological concepts of problem behaviour', in GILLHAM, B. (ed.) *Reconstructing Educational Psychology*, London, Croom Helm.

RUTTER, M., YULE, B., QUINTON, D., ROWLANDS, D., YULE, W. and BERGER, M. (1974) 'Attainment and adjustment in two geographical areas: III—some factors accounting for area differences', *British Journal of Psychiatry*, **126**, pp. 520–33.

SKINNER, B. F. (1973) *Science and Human Behaviour*, Toronto, Macmillan.

SUTTON, A. (1981) 'Whose psychology? Some issues in the social control of psychological practice', in McPHERSON, I. and SUTTON, A. (eds) *Reconstructing Psychological Practice*, London, Croom Helm.

SUTTON, A. (1982) 'The social role of educational psychology in the definition of educational subnormality', in BARTON, L. and TOMLINSON, S. (eds) *Special Education: policy, practices and social issues*, London, Harper and Row.

TERMAN, L. M. (1916) *The Measurement of Intelligence*, Boston, Houghton Miffiin.

TYLER, V. O. (1965) *Exploring the use of operant techniques in the rehabilitation of delinquent boys*, paper read at the American Psychological Association Congress, Chicago.

WECHSLER, D. (1975) 'Intelligence defined and undefined: a relativistic appraisal', *American Psychology*, **30**, pp. 135–9.

WHITING, B. (1974) 'Folk wisdom and child rearing', *Merrill Palmer Quarterly*, **20**, pp. 9–20.

WILLIAMS, P. (1966) 'Some characteristics of educationally subnormal children,' *British Journal of Psychiatry*, **112**, pp. 79–90.

WILLIAMS, P. and GRUBER, E. (1967) *Response to Special Schooling*, London, Longman.

WOLPE, J. (1973) *The Practice of Behaviour Therapy*, New York, Pergamon Press (2nd edn).

WOOLFOLK, A. E., WOOLFOLK, R. L. and WILSON, G. T. (1977) 'A rose by any other name . . . labelling bias and attitudes towards behaviour modification', *Journal of Counselling and Clinical Psychology*, **45**, pp. 184–91.

WRIGHT, H. J. and FAYNE, T. A. N. (1979) *An Evaluation of a School Psychological Service: the Portsmouth pattern*, Winchester, Hampshire Education Department.

Acknowledgements

Grateful acknowledgement is made to the following sources for material used in this unit:

Text

Burland, J. R. (1979) 'Behaviour modification in a residential school for junior maladjusted boys' in *Journal of the Association for Workers with Maladjusted Children*, 7; Leach, D. J. and Raybould, E. C. (1977) *Learning and Behaviour Difficulties in School*, Open Books Publishing Ltd; Grunsell, R. (1980) *Beyond Control? Schools and Suspension*, Chameleon Books.

Illustrations

p. 10 (*left* Archives of the History of American Psychology, The University of Akron, Ohio; *p. 17* Times Newspapers Ltd; *p. 22* (*left and right*) by permission of Malcolm Jones, Beech Tree House, Meldreth Manor School, Meldreth; *p. 38* (*left*) National Portrait Gallery, London; *p. 38* (*right*) Giraudon, Paris; *p. 39* (*top*) photograph by E. Mandelmann, reproduced with permission of the World Health Organization; *p. 39* (*bottom*) Janine Wiedel.

The course

This text forms part of an Open University course, E241 *Special Needs in Education*. The complete list of units in the course appears below.

Unit 1/2 Special biographies	Unit 10 National perspectives
Unit 3 Family views	Unit 11 Biology and handicap
Unit 4 Education for adult life?	Unit 12 Psychology and special education
Unit 5/6 A special curriculum?	Unit 13 Handicap is social
Unit 7 The professionals	Unit 14 Eradicating handicap
Unit 8 The powers that be	Unit 15 Research in special education
Unit 9 Origins	Unit 16 An alternative system: a special imagination

For general availability of supporting material referred to in this text please write to: Open University Educational Enterprises Ltd, 12 Cofferidge Close, Stony Stratford, Milton Keynes MK11 1BY.

Further information about Open University courses may be obtained from: The Admissions Office, The Open University, PO Box 48, Walton Hall, Milton Keynes MK7 6AB.

The author

Will Swann is a lecturer in educational psychology at the Open University. Before joining the Open University in 1977, he worked on the Schools Council project, *Education of Severely Educationally Subnormal Pupils*. He is joint author of *Teaching Language and Communication to the Mentally Handicapped* (Evans/Methuen), and has written for the Open University courses E362, *Cognitive Development*, and E200, *Contemporary Issues in Education*. His research is in special education and adult–child interaction, particularly interaction between teachers and mentally handicapped children.

For this course, he is a co-author of Units 3, 5/6 and 16. He also edited the course's Reader, *The Practice of Special Education* (1981, Basil Blackwell/The Open University Press).

0 335 13129 8
The Open University Press